JOHN BEL EDWARDS
GOVERNOR

CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No.:

Activity No.: PER20160001
Agency Interest No.: 4634

Mr. Chris A. Labat
Vice President of Engineering and Technology
LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

RE: Part 70 Operating Permit Modification
LOOP Port Complex, LOOP LLC
Cut Off, Lafourche Parish, Louisiana

Dear Mr. Labat:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 30th of July, 2020, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this _____ day of _____, 2016.

Permit No.: 1560-00027-V2

Sincerely,

Elliott B. Vega
Assistant Secretary
EBV:qmz
c: EPA Region VI

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
LOOP LLC - LOOP PORT COMPLEX
PROPOSED PART 70 AIR OPERATING PERMIT MODIFICATION
AND PSD PERMIT MODIFICATION

The LDEQ, Office of Environmental Services, is accepting written comments on a Part 70 air operating permit modification and PSD permit modification for LOOP LLC, 137 Northpark Boulevard, Covington, Louisiana 70433 for the LOOP Port Complex. **The facility is located at 224 East 101st Place, Cut Off, Lafourche Parish.**

LOOP Port Complex is a pipeline terminal facility. It consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. LOOP LLC requested to add an additional five (5) crude oil storage tanks for its Clovelly Dome Storage Terminal expansion project. The overall tank capacity at the terminal will be increased to approximately 14 million barrels. The oil throughput at the terminal will be increased to 250 million barrels per year.

This permit was processed as an expedited permit in accordance with LAC 33:I.Chapter 18.

Estimated emissions from the facility, in tons per year (TPY), are as follows:

Pollutant	Before	After	Change
PM_{10}	0.49	0.50	+ 0.01
$PM_{2.5}$	0.49	0.50	+ 0.01
SO_2	0.43	0.43	--
NO_X	10.15	10.94	+ 0.79
CO	2.24	2.41	+ 0.17
VOC	437.54	418.26	- 19.28

A working draft of the proposed permit was submitted to the facility representative. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

Comments and requests for a public hearing or notification of the final decision can be submitted via personal delivery, U.S. mail, email, or fax. **Comments and requests for public hearings must be received by 4:30 pm CST, Wednesday, November 9, 2016.** Delivery may be made to the drop-box at 602 N. 5th St., Baton Rouge, LA 70802. U.S. Mail may be sent to LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. Emails may be submitted to DEQ.PUBLICNOTICES@LA.GOV and faxes sent to (225) 219-3309.

Please see additional instructions for comment submission, hand delivery and information regarding electronic submission at http://www.deq.louisiana.gov/portal/Default.aspx?tabid=2256 or call (225) 219-3276.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The permit application, proposed permits, and statement of basis are available for review at the LDEQ, Public Records Center, Room 128, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

An additional copy may be reviewed at the Lafourche Parish Library - South Lafourche Branch, 16241 East Main Street, Cut Off, LA 70345.

Inquiries or requests for additional information regarding this permit action should be directed to Dr. Qingming Zhang,

LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3457.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at DEQ.PUBLICNOTICES@LA.GOV or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the proposed permits and statement of basis can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at http://louisiana.gov/Services/Email_Notifications_DEQ_PN/.

All correspondence should specify AI Number 4634, Permit Number 1560-00027-V2 and PSD-LA-796 (M-1), and Activity Number PER20160001 and PER20160002.

Scheduled Publication Date: October 5, 2016

AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana

I. Background

LOOP LLC's LOOP Port Complex is an existing pipeline terminal facility in Cut Off and Leeville, Lafourche Parish, Louisiana. The LOOP Port Complex operated under Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796, issued July 30, 2015, prior to issuance of this permit.

II. Origin

A permit application dated June 10, 2016 was submitted by LOOP LLC requesting a Part 70 operating permit modification for above referenced facility. Additional information dated September 15, 16 and 23, 2016 was also received.

III. Description

The LOOP Port Complex consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. The Clovelly Dome Storage Terminal consists of nine (9) underground storage caverns and fifteen (15) operational aboveground storage tanks. The caverns and tanks provide storage for crude oil prior to pipeline delivery. Eight (8) of the caverns have a capacity of approximately 6.7 million barrels of oil each, and one cavern has a capacity of 4 million barrels of oil. The combined aboveground storage tanks have a capacity of 9 million barrels of oil.

The terminal also consists of surface facilities located in the same general vicinity which include a Brine Storage Reservoir, Operations Building, a crude relief tank, fuel and slop oil tanks, emergency electric generators, and ancillary equipment. The Small Boat Harbor, located on Bayou Lafourche, shelters crew and work boats and includes hose testing facilities. The Fourchon Booster Station is a secured unmanned facility with two large diesel storage tanks and a few small storage tanks. Emission control systems utilized at the LOOP Port Complex facilities include the latest storage tank technology, mechanical seals on pumps, and the use of low sulfur fuel oil.

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved in Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796 on July 30, 2015.

With this permit modification, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000

barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

In addition, LOOP proposes to add a 500-kW diesel-fuel fired emergency electric generator and an associated diesel tank (insignificant activity). The tank cleaning emission estimates are changed as follows: 1) two tank cleanings per year rather than one tank cleaning per year, and 2) tank cleaning emissions being controlled by a portable thermal oxidizer. Fugitive emissions from the facility are also reconciled.

Estimated emissions in tons per year are as follows:

Pollutant	Before	After	Change
PM_{10}	0.49	0.50	+ 0.01
$PM_{2.5}$	0.49	0.50	+ 0.01
SO_2	0.43	0.43	--
NO_X	10.15	10.94	+ 0.79
CO	2.24	2.41	+ 0.17
VOC	437.54	418.26	- 19.28

LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	Before	After	Change
2,2,4-Trimethylpentane	0.22	0.22	--
Benzene	2.60	2.48	- 0.12
Cumene	0.04	0.04	--
Ethyl benzene	0.26	0.26	--
n-Hexane	2.73	2.60	- 0.13
Toluene	1.39	1.36	- 0.03
Xylenes	0.76	0.78	+ 0.02
Total	**8.00**	**7.74**	**- 0.26**

IV. Type of Review

This permit was reviewed for compliance with 40 CFR 70 and the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Prevention of Significant Deterioration (PSD).

This facility is a minor source of toxic air pollutants (TAPs) under LAC 33:III.Chapter 51 and an area source of hazardous air pollutants (HAPs).

V. Credible Evidence

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

VI. Public Notice

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge and in *The Lafourche Gazette* in Lafourche Parish on [date], 2016. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on [date], 2016. The draft permit was also submitted to US EPA Region VI on [date], 2016. All comments will be considered prior to a final permit decision.

VII. Effects on Ambient Air

Emissions associated with the proposed modification were reviewed by LDEQ to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

VIII. General Condition XVII Activities

Work Activity	Schedule	Emission Rates – tons per year				
		PM_{10}	SO_2	NO_X	CO	VOC
Use of Portable Thermal Oxidizer for Tank Cleaning	2 times/year	0.06	0.01	0.79	0.67	

AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana

IX. Insignificant Activities

ID No.	Description	Citation
2-78	Diesel Fuel Tank for Turbine Generator (Clovelly Dome), 8,200 gallons	LAC 33:III.501.B.5.A.3
22-78	Diesel Fuel Tank for Emergency Crude Pump (Clovelly Dome), 8,200 gallons	LAC 33:III.501.B.5.A.3
25-88	Tank 3 – Operations Center – Diesel Tank (Clovelly Dome), 550 gallons	LAC 33:III.501.B.5.A.3
26-88	Tank 4 – Operations Center – Diesel Tank (Clovelly Dome), 4,000 gallons	LAC 33:III.501.B.5.A.3
27-88	Tank 5 – Fourchon Booster Station Diesel Tank, 1,000 gallons	LAC 33:III.501.B.5.A.3
28-88	Tank 6 – Fourchon Booster Station Emergency Generator Diesel Tank (Clovelly Dome), 322 gallons	LAC 33:III.501.B.5.A.3
29-88	Tank 7 – Fourchon Booster Station Dock Diesel Tank, 560 gallons	LAC 33:III.501.B.5.A.3
30-88	Tank 8 – Clovelly Day Tank for Fire Pumps, 80 gallons	LAC 33:III.501.B.5.A.2
31-88	Tank 9 – Clovelly Day Tank for Generators, 115 gallons	LAC 33:III.501.B.5.A.2
32-88	Tank 10 – Clovelly Underground Slop Oil Tank by Lab, 2,000 gallons	LAC 33:III.501.B.5.A.3
34-88	Tank 12 – Small Boat Harbor Diesel Tank, 260 gallons	LAC 33:III.501.B.5.A.3
36-89	Day Tank for Operations Center Standby Generator (Clovelly Dome), 94 gallons	LAC 33:III.501.B.5.A.2
37-91	Small Boat Harbor Diesel Tank, 564 gallons	LAC 33:III.501.B.5.A.3
38-16	Day Tank for Standby Generator (Clovelly Dome), 94 gallons	LAC 33:III.501.B.5.A.2
1A	Lab Equipment/Vents	LAC 33:III.501.B.5.A.6

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.	Description	LAC 33:III.Chapter																			
		5▲	509	9	11	13	15	2103	2104*	2107	2111	2113	2115	2116*	2121	22	29*	51*	53*	56	59*
UNF01	LOOP Port Complex	1	1	1	1	1	3				1	1	3				1	3		1	3
EQT03	1-78: Crude Relief Tank (Clovelly Dome)							1													
EQT04	5-78: Slop Oil Tank (Small Boat Harbor)							2													
EQT06	11-78: Fourchon Booster Station Tank No. 1 – Diesel Fuel							2													
EQT07	12-78: Salt Dome Cavities (9): Piping: and Brine Storage Reservoir (Clovelly Dome)																				
EQT08	13-78: Fourchon Booster Station Tank No. 2 – Diesel Fuel							2													
EQT09	15-78: 805 hp Fourchon Booster Station –Standby Generator				1	1															
EQT11	17-78: 671 hp Operations Center Standby Generator				1	1															
EQT12	18-78: 860 hp Emergency Crude Transfer Pump (Clovelly Dome)				1	1															
EQT14	20-78: Clovelly Fire Pump				1	1															
EQT15	21-78: Standby Generator – Brine Storage Reservoir (Clovelly Dome)				1	1															
EQT16	23-88: Tank 1 Operations Center – Gasoline Tank (Clovelly Dome)							1													
EQT17	24-88: Tank 2 Operations Center – Gasoline Tank (Clovelly Dome)							1													

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.	Description	LAC 33:III.Chapter																		
		5▲	509	9	11	13	15	2103	2104*	2107	2111	2113	2115	2116*	2121	22	29*	51*	53*	56	59*
EQT18	35-88: Fire School Pump (Clovelly Dome)				1	1															
EQT19	38-91: Operations Center Fire Pump (Clovelly Dome)				1	1															
EQT20	5-99: Crude Oil Tank Farm Firewater Pump (Clovelly Dome)				1	1															
EQT21	1-07: Emergency Generator				1	1															
EQT22	2-07: Emergency Generator				1	1															
EQT23	3-07: Emergency Generator				1	1															
EQT24	4-07: Emergency Generator				1	1															
EQT25	5-07: Emergency Generator				1	1															
EQT26	6-07: Emergency Generator				1	1															
EQT27	1-99: Tank 6401 (Clovelly Dome) External Floating Roof (EFR)							1													
EQT28	2-99: Tank 6402 (Clovelly Dome)							1													
EQT29	3-99: Tank 6405 (Clovelly Dome)							1													
EQT30	4-99: Tank 6406 (Clovelly Dome)							1													
EQT31	6-02: Tank 6409 (Clovelly Dome)							1													
EQT32	7-02: Tank 6410 (Clovelly Dome)							1													
EQT33	8-07: Tank 6403 (Clovelly Dome)							1													
EQT34	9-07: Tank 6404 (Clovelly Dome)							1													
EQT35	10-07: Tank 6407 (Clovelly Dome)							1													
EQT36	11-07: Tank 6408 (Clovelly Dome)							1													
EQT37	12-07: Tank 6411 (Clovelly Dome)							1													
EQT38	13-07: Tank 6412 (Clovelly Dome)							1													

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.	Description	LAC 33:III.Chapter																		
		5▲	509	9	11	13	15	2103	2104*	2107	2111	2113	2115	2116*	2121	22	29*	51*	53*	56	59*
EQT40	15-07: Tank 6414 (Clovelly Dome)							1													
EQT42	17-10: Tank 6416 (Clovelly Dome)							1													
EQT43	18-10: Tank 6417 (Clovelly Dome)							1													
EQT47	1-10: 520 hp Emergency Generator				1	1															
EQT48	22-14: Tank 6413 (Clovelly Dome)		1					1													
EQT49	23-14: Tank 6415 (Clovelly Dome)		1					1													
EQT50	24-14: Tank 6418 (Clovelly Dome)		1					1													
EQT51	25-14: Tank 6419 (Clovelly Dome)		1					1													
EQT52	26-14: Tank 6420 (Clovelly Dome)		1					1													
EQT53	27-14: Tank 6421 (Clovelly Dome)		1					1													
EQT54	28-16: Tank 6422 (Clovelly Dome)		1					1													
EQT55	29-16: Tank 6423 (Clovelly Dome)		1					1													
EQT56	30-16: Tank 6424 (Clovelly Dome)		1					1													
EQT57	31-16: Tank 6425 (Clovelly Dome)		1					1													
EQT58	32-16: Tank 6426 (Clovelly Dome)		1					1													
EQT59	1-16: Standby Generator (Clovelly Dome)				1	1															
FUG01	10-78: Fugitive Emissions (Clovelly Dome)										1				3						

* The regulations indicated above are State Only regulations.

▲ All LAC 33:III.Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana

KEY TO MATRIX

1 -The regulations have applicable requirements that apply to this particular emission source.
-The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.

2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.

3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank – The regulations clearly do not apply to this type of emission source.

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

ID No.	Description	40 CFR 60 NSPS									40 CFR 61			40 CFR 63 NESHAP					40 CFR	
		A	K	Ka	Kb	Db	Dc	GG	KKK	IIII	A	J	V	A	HH	SS	VV	ZZZZ	64	68
UNF01	LOOP Port Complex	1												1						3
EQT03	1-78: Crude Relief Tank (EFR) (Clovelly Dome)			1																
EQT04	5-78: Slop Oil Tank (Small Boat Harbor)			3																
EQT06	11-78: Fourchon Booster Station Tank No. 1 – Diesel Fuel			3																
EQT07	12-78: Salt Dome Cavities (9): Piping: and Brine Storage Reservoir (Clovelly Dome)																			
EQT08	13-78: Fourchon Booster Station Tank No. 2 – Diesel Fuel			3																
EQT09	15-78: 805 hp Fourchon Booster Station –Standby Generator									3								1		
EQT11	17-78: 671 hp Operations Center Standby Generator									3								1		
EQT12	18-78: 860 hp Emergency Crude Transfer Pump (Clovelly Dome)									3								1		
EQT14	20-78: Clovelly Fire Pump									3								1		
EQT15	21-78: Standby Generator – Brine Storage Reservoir (Clovelly Dome)									3								1		
EQT16	23-88: Tank 1 Operations Center – Gasoline Tank (Clovelly Dome)				3									Subpart CCCCCC applies						
EQT17	24-88: Tank 2 Operations Center – Gasoline Tank (Clovelly Dome)				3									Subpart CCCCCC applies						

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ID No.	Description	40 CFR 60 NSPS									40 CFR 61			40 CFR 63 NESHAP					40 CFR	
		A	K	Ka	Kb	Db	Dc	GG	KKK	IIII	A	J	V	A	HH	SS	VV	ZZZZ	64	68
EQT18	35-88: Fire School Pump (Clovelly Dome)									3								1		
EQT19	38-91: Operations Center Fire Pump (Clovelly Dome)									3								1		
EQT20	5-99: Crude Oil Tank Farm Firewater Pump (Clovelly Dome)									3								1		
EQT21	1-07: Emergency Generator									3								1		
EQT22	2-07: Emergency Generator									3								1		
EQT23	3-07: Emergency Generator									3								1		
EQT24	4-07: Emergency Generator									3								1		
EQT25	5-07: Emergency Generator									3								1		
EQT26	6-07: Emergency Generator									3								1		
EQT27	1-99: Tank 6401 (Clovelly Dome) External Floating Roof				1															
EQT28	2-99: Tank 6402 (Clovelly Dome)				1															
EQT29	3-99: Tank 6405 (Clovelly Dome)				1															
EQT30	4-99: Tank 6406 (Clovelly Dome)				1															
EQT31	6-02: Tank 6409 (Clovelly Dome)				1															
EQT32	7-02: Tank 6410 (Clovelly Dome)				1															
EQT33	8-07: Tank 6403 (Clovelly Dome)				1															
EQT34	9-07: Tank 6404 (Clovelly Dome)				1															
EQT35	10-07: Tank 6407 (Clovelly Dome)				1															
EQT36	11-07: Tank 6408 (Clovelly Dome)				1															
EQT37	12-07: Tank 6411 (Clovelly Dome)				1															
EQT38	13-07: Tank 6412 (Clovelly Dome)				1															

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LOOP Port Complex
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EQT40	15-07: Tank 6414 (Clovelly Dome)				1															
EQT42	17-10: Tank 6416 (Clovelly Dome)				1															
EQT43	18-10: Tank 6417 (Clovelly Dome)				1															
EQT47	1-10: 520 hp Emergency Generator									1								1		
EQT48	22-14: Tank 6413 (Clovelly Dome)				1															
EQT49	23-14: Tank 6415 (Clovelly Dome)				1															
EQT50	24-14: Tank 6418 (Clovelly Dome)				1															
EQT51	25-14: Tank 6419 (Clovelly Dome)				1															
EQT52	26-14: Tank 6420 (Clovelly Dome)				1															
EQT53	27-14: Tank 6421 (Clovelly Dome)				1															
EQT54	28-16: Tank 6422 (Clovelly Dome)				1															
EQT55	29-16: Tank 6423 (Clovelly Dome)				1															
EQT56	30-16: Tank 6424 (Clovelly Dome)				1															
EQT57	31-16: Tank 6425 (Clovelly Dome)				1															
EQT58	32-16: Tank 6426 (Clovelly Dome)				1															
EQT59	1-16: Standby Generator (Clovelly Dome)									1								1		
FUG01	10-78: Fugitive Emissions (Clovelly Dome)																			

KEY TO MATRIX

1 -The regulations have applicable requirements that apply to this particular emission source.
-The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.

2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.
Blank – The regulations clearly do not apply to this type of emission source.

XI. Explanation for Exemption Status or Non-Applicability of a Source				
ID No.	Requirement	Status	Citation	Explanation
UNF001 LOOP Port Complex	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.Chapter 51]	Does not apply	LAC 33:III.5101.A	The facility is not a major source of toxic air pollutants as defined under LAC 33:III.5103.
	Chemical Accident Prevention Provisions [40 CFR 68]; Chemical Accident Prevention and Minimization of Consequences [LAC 33:III.Chapter 59]	Does not apply	40 CFR 68.10; LAC 33.III.5901	The facility does not store or process any referenced listed substance greater than the threshold amounts.
	Emission Standards for Sulfur Dioxide [LAC 33:III.Chapter 15]	Does not apply	LAC 33:III.1502.A.3	No emission point sources from the facility emit 5 tons/year or more SO_2.
	Waste Gas Disposal [LAC 33:III.2115]	Does not apply	LAC 33:III.2115	The facility does not have any waste gas streams.
EQT004, EQT006, and EQT008 Slop Oil Tank (Small Boat Harbor) and Fourchon Booster Station No. 2 Fuel Tanks No. 1 and No. 2	Control of Emissions of Organic Compounds – Storage of Volatile Organic Compounds [LAC 33:III.Chapter 21]	Exempt	LAC 33:III.2103.B	Stored material having the maximum true vapor pressure less than the threshold of 1.5 psia.
	NSPS Subpart Ka – Standards of Performance for Storage Vessels for Petroleum Liquids [40 CFR 60.110a]	Does not apply	40 CFR 60.110a(a)	Does not store petroleum liquids.
EQT009, EQT0011, EQT015, EQT021 thru EQT026 Emergency Generator Engines	NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60.4200]	Does not apply	40 CFR 60.4200(a)(2)(i) 40 CFR 60.4200(a)(3)	Engines are not fire pumps and were manufactured prior to April 1, 2006 and were not modified or reconstructed after July 11, 2005.
EQT016 and EQT017 Gasoline Tanks	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquids Storage Vessels [40 CFR 60.110b]	Does not apply	40 CFR 60.110b(a)	The capacity of each tank is less than 75 m^3.

XI. Explanation for Exemption Status or Non-Applicability of a Source				
ID No.	Requirement	Status	Citation	Explanation
EQT012, EQT014, and EQT018 thru EQT020 Fire Pump Engines	NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR 60.4200]	Does not apply	40 CFR 60.4200(a)(2)(ii) 40 CFR 60.4200(a)(3)	Engines were manufactured prior to April 1, 2006 and were not modified or reconstructed after July 11, 2005.
FUG001 Fugitive Emissions (Clovelly Dome)	Control of Emissions of Organic Compounds - Fugitive Emissions Control [LAC 33:III.Chapter 21]	Does not apply	LAC 33:III.2121.A	Not a listed facility.

The above table provides explanation for both the exemption status and non-applicability of a source cited by 2 or 3 in the matrix presented in Section X of this permit

General Information

AI ID: 4634 LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

Also Known As:

ID	Name	User Group	Start Date
2205700027	AFS (EPA Air Facility System)	AFS (EPA Air Facility System)	01-01-2000
1560-00027	LOOP LLC - Port Complex	CDS Number	10-12-1996
15639811	EPA EIS Facility Site ID	EPA EIS Facility Site ID	01-01-2011
72-0723344	LOOP LLC - Port Complex	Federal Tax ID	11-21-1999
LAD980698799	LOOP LLC - Port Complex	Hazardous Waste Notification	02-22-1983
LA0049492	LPDES #	LPDES Permit #	06-25-2003
	Priority 2 Emergency Site	Priority 2 Emergency Site	07-20-2006
	Radiation General License	Radiation License Number	01-09-2002
29006030	UST Facility ID #	UST FID #	10-11-2002
WQC 100401-02	Water Quality Certification #	Water Certification	04-13-2010
2164	LOOP LLC - Port Complex	Water Permitting	11-21-1999

Physical Location: 224 E 101st Pl
Cut Off, LA 70345

Mailing Address: 137 Northpark Blvd
Covington, LA 70433

Location of Front Gate: 29.463215 latitude, -90.306144 longitude, Coordinate Method: Lat.\Long - Decimal Degrees, Coordinate Datum: NAD83

Related People:

Name	Mailing Address	Phone (Type)	Relationship
CaSandra Cooper-Gates	111 Veterans Blvd Ste 600 Metairie, LA 70005	9852766282 (WP)	Responsible Official for
CaSandra Cooper-Gates	111 Veterans Blvd Ste 600 Metairie, LA 70005	9852766282 (WP)	Water Permit Contact For
Cynthia Gardner-LeBlanc	137 Northpark Dr Covington, LA 704335071	cgleblanc@loopllc.c	Emission Inventory Facility Contact for
Cynthia Gardner-LeBlanc	137 Northpark Dr Covington, LA 704335071	9852766299 (WP)	Emission Inventory Facility Contact for
Cynthia Gardner-LeBlanc	137 Northpark Dr Covington, LA 704335071	cgleblanc@loopllc.c	Water Permit Contact For
Cynthia Gardner-LeBlanc	137 Northpark Dr Covington, LA 704335071	9852766299 (WP)	Water Permit Contact For

Related Organizations:

Name	Address	Phone (Type)	Relationship
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	Air Billing Party for
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@loopllc.c	Air Billing Party for
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	Operates
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@loopllc.c	Operates
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	Owns
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@loopllc.c	Water Billing Party for
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	UST Billing Party for
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@loopllc.c	UST Billing Party for

General Information

AI ID: 4634 LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
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Related Organizations:

Name	Address	Phone (Type)	Relationship
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	Emission Inventory Billing Party
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@looplic.c	Emission Inventory Billing Party
LOOP LLC	137 Northpark Blvd Covington, LA 70433	9852766299 (WP)	Water Billing Party for
LOOP LLC	137 Northpark Blvd Covington, LA 70433	cgleblanc@looplic.c	Owns

NAIC Codes: 486110, Pipeline Transportation of Crude Oil

Note: This report entitled "General Information" contains a summary of facility-level information contained in LDEQ's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may email your changes to facupdate@la.gov.

INVENTORIES

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
LOOP Port Complex						
EQT 0003	1-78 - Crude Relief Tank (Clovelly Dome)	2.31 million gallons		23.1 MM gallons/yr	External Floating Roof (EFR)	8760 hr/yr
EQT 0004	5-78 - Slop Oil Tank (Small Boat Harbor)	79315 gallons		84000 gallons/yr	wastwater and lube oils	8760 hr/yr
EQT 0006	11-78 - Fourchon Booster Station No. 2 Fuel Tank No. 1	1.18 million gallons		23 MM gallons/yr		8760 hr/yr
EQT 0007	12-78 - Salt Dome Cavities (9), Piping, and Brine Storage Reservoir (Clovelly Dome)	1806 million gallons		600 MM bbl/yr		8760 hr/yr
EQT 0008	13-78 - Fourchon Booster Station No. 2 Fuel Tank No. 2 (Clovelly Dome)	1.18 million gallons		23 MM gallons/yr		8760 hr/yr
EQT 0009	15-78 - Fourchon Booster Station - Standby Generator		805 horsepower	805 horsepower		100 hr/yr
EQT 0011	17-78 - Operations Center Standby Generator		671 horsepower	671 horsepower		100 hr/yr
EQT 0012	18-78 - Emergency Crude Transfer Pump (Clovelly Dome)		860 horsepower	860 horsepower		100 hr/yr
EQT 0014	20-78 - Clovelly Fire Pump			1.92 MM BTU/hr		100 hr/yr
EQT 0015	21-78 - Standby Generator - Brine Storage Reservoir (Clovelly Dome)		108 horsepower	108 horsepower		100 hr/yr
EQT 0016	23-88 - Tank 1 Operations Center (Clovelly Dome)	1000 gallons		9000 gallons/yr		8760 hr/yr
EQT 0017	24-88 - Tank 2 Operations Center (Clovelly Dome)	1000 gallons		9000 gallons/yr		8760 hr/yr
EQT 0018	35-88 - Fire School Pump (Clovelly Dome)		400 horsepower	400 horsepower		100 hr/yr
EQT 0019	38-91 - Operations Center - Fire Pump (Clovelly Dome)		500 horsepower	500 horsepower		100 hr/yr
EQT 0020	5-99 - Crude Oil Tankfarm Firewater Pump (Clovelly Dome)		1100 horsepower	1100 horsepower		100 hr/yr
EQT 0021	1-07 - 470 bhp Emergency Generator (Small Boat Harbor)		470 brake hp	470 brake hp		100 hr/yr
EQT 0022	2-07 - 470 bhp Emergency Generator (Tank Facility)		470 brake hp	470 brake hp		100 hr/yr
EQT 0023	3-07 - 671 bhp Emergency Generator (Clovelly Dome)		671 brake hp	671 brake hp		100 hr/yr
EQT 0024	4-07 - 671 bhp Emergency Generator (Clovelly Control Room)		671 brake hp	671 brake hp		100 hr/yr
EQT 0025	5-07 - 268 bhp Emergency Generator (OC Warehouse)		268 brake hp	268 brake hp		100 hr/yr
EQT 0026	6-07 - 168 bhp Emergency Generator (LOCAP)		168 brake hp	168 brake hp		100 hr/yr
EQT 0027	1-99 - Tank 6401 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0028	2-99 - Tank 6402 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0029	3-99 - Tank 6405 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0030	4-99 - Tank 6406 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0031	6-02 - Tank 6409 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0032	7-02 - Tank 6410 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0033	8-07 - Tank 6403 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0034	9-07 - Tank 6404 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0035	10-07 - Tank 6407 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0036	11-07 - Tank 6408 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0037	12-07 - Tank 6411 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0038	13-07 - Tank 6412 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0040	15-07 - Tank 6414 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr

INVENTORIES

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
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Subject Item Inventory:

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
LOOP Port Complex						
EQT 0042	17-10 - Tank 6416 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0043	18-10 - Tank 6417 (Clovelly Dome)	600000 bbl		25000 bbl/day	EFR	8760 hr/yr
EQT 0047	1-10 - 520 hp Emergency Generator		520 brake hp	520 brake hp		100 hr/yr
EQT 0048	22-14 - Tank 6413 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0049	23-14 - Tank 6415 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0050	24-14 - Tank 6418 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0051	25-14 - Tank 6419 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0052	26-14 - Tank 6420 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0053	27-14 - Tank 6421 (Clovelly Dome)	371000 bbl		26093 bbl/day	EFR	8760 hr/yr
EQT 0054	28-16 - Tank 6422 (Clovelly Dome)	371000 bbl		27397 bbl/day	EFR	8760 hr/yr
EQT 0055	29-16 - Tank 6423 (Clovelly Dome)	600000 bbl		27397 bbl/day	EFR	8760 hr/yr
EQT 0056	30-16 - Tank 6424 (Clovelly Dome)	600000 bbl		27397 bbl/day	EFR	8760 hr/yr
EQT 0057	31-16 - Tank 6425 (Clovelly Dome)	600000 bbl		27397 bbl/day	EFR	8760 hr/yr
EQT 0058	32-16 - Tank 6426 (Clovelly Dome)	600000 bbl		27397 bbl/day	EFR	8760 hr/yr
EQT 0059	1-16 - Standby Generator (Clovelly Dome)		671 horsepower	671 horsepower	Diesel	100 hr/yr
FUG 0001	10-78 - Fugitive Emissions (Clovelly Dome)			Not applicable		8760 hr/yr

Stack Information:

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
LOOP Port Complex							
EQT 0009	15-78 - Fourchon Booster Station - Standby Generator	237	5014	.57		16	850
EQT 0011	17-78 - Operations Center Standby Generator	161	6759	.67		18	865
EQT 0012	18-78 - Emergency Crude Transfer Pump (Clovelly Dome)	225	5300	.6		16	880
EQT 0014	20-78 - Clovelly Fire Pump	238	1943	.42		12	185
EQT 0015	21-78 - Standby Generator - Brine Storage Reservoir (Clovelly Dome)	212	1087.93	.33		10	1100
EQT 0018	35-88 - Fire School Pump (Clovelly Dome)	386.2	790	.21		6	820
EQT 0019	38-91 - Operations Center - Fire Pump (Clovelly Dome)	386.2	790	.21		6	820
EQT 0020	5-99 - Crude Oil Tankfarm Firewater Pump (Clovelly Dome)	1.35	104	1.28		6	870
EQT 0021	1-07 - 470 bhp Emergency Generator (Small Boat Harbor)	307.7	3625	.5		9.38	901
EQT 0022	2-07 - 470 bhp Emergency Generator (Tank Facility)	307.7	3625	.5		9.38	901
EQT 0023	3-07 - 671 bhp Emergency Generator (Clovelly Dome)	220.69	2600	.5		9.83	810
EQT 0024	4-07 - 671 bhp Emergency Generator (Clovelly Control Room)	220.69	2600	.5		9.83	810
EQT 0025	5-07 - 268 bhp Emergency Generator (OC Warehouse)	135.94	1130	.42		10.25	1056
EQT 0026	6-07 - 168 bhp Emergency Generator (LOCAP)	304.9	898	.25		10.58	950

INVENTORIES

AI ID: 4634 - LOOP LLC - LOOP Port Complex
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Stack Information:

ID	Description	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
LOOP Port Complex							
EQT 0047	1-10 - 520 hp Emergency Generator	220.69	2600	.5		9.83	810
EQT 0059	1-16 - Standby Generator (Clovelly Dome)	161	6759	.67		18	865

Relationships:

Subject Item Groups:

ID	Group Type	Group Description
CRG 0001	Common Requirements Group	GP - Generators and Pumps
CRG 0002	Common Requirements Group	STKS - Storage Tanks
GRP 0003	Equipment Group	TANK CAP - Crude Oil Storage Tank CAP (Clovelly Dome)
UNF 0001	Unit or Facility Wide	LPC - LOOP Port Complex

Group Membership:

ID	Description	Member of Groups
EQT 0009	15-78 - Fourchon Booster Station - Standby Generator	CRG0000000001
EQT 0011	17-78 - Operations Center Standby Generator	CRG0000000001
EQT 0012	18-78 - Emergency Crude Transfer Pump (Clovelly Dome)	CRG0000000001
EQT 0014	20-78 - Clovelly Fire Pump	CRG0000000001
EQT 0015	21-78 - Standby Generator - Brine Storage Reservoir (Clovelly Dome)	CRG0000000001
EQT 0018	35-88 - Fire School Pump (Clovelly Dome)	CRG0000000001
EQT 0019	38-91 - Operations Center - Fire Pump (Clovelly Dome)	CRG0000000001
EQT 0020	5-99 - Crude Oil Tankfarm Firewater Pump (Clovelly Dome)	CRG0000000001
EQT 0021	1-07 - 470 bhp Emergency Generator (Small Boat Harbor)	CRG0000000001
EQT 0022	2-07 - 470 bhp Emergency Generator (Tank Facility)	CRG0000000001
EQT 0023	3-07 - 671 bhp Emergency Generator (Clovelly Dome)	CRG0000000001
EQT 0024	4-07 - 671 bhp Emergency Generator (Clovelly Control Room)	CRG0000000001
EQT 0025	5-07 - 268 bhp Emergency Generator (OC Warehouse)	CRG0000000001
EQT 0026	6-07 - 168 bhp Emergency Generator (LOCAP)	CRG0000000001
EQT 0027	1-99 - Tank 6401 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0028	2-99 - Tank 6402 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0029	3-99 - Tank 6405 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0030	4-99 - Tank 6406 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0031	6-02 - Tank 6409 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0032	7-02 - Tank 6410 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0033	8-07 - Tank 6403 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0034	9-07 - Tank 6404 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0035	10-07 - Tank 6407 (Clovelly Dome)	CRG0000000002, GRP0000000003

INVENTORIES

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Group Membership:

ID	Description	Member of Groups
EQT 0036	11-07 - Tank 6408 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0037	12-07 - Tank 6411 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0038	13-07 - Tank 6412 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0040	15-07 - Tank 6414 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0042	17-10 - Tank 6416 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0043	18-10 - Tank 6417 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0048	22-14 - Tank 6413 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0049	23-14 - Tank 6415 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0050	24-14 - Tank 6418 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0051	25-14 - Tank 6419 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0052	26-14 - Tank 6420 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0053	27-14 - Tank 6421 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0054	28-16 - Tank 6422 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0055	29-16 - Tank 6423 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0056	30-16 - Tank 6424 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0057	31-16 - Tank 6425 (Clovelly Dome)	CRG0000000002, GRP0000000003
EQT 0058	32-16 - Tank 6426 (Clovelly Dome)	CRG0000000002, GRP0000000003

NOTE: The UNF group relationship is not printed in this table. Every subject item is a member of the UNF group

Annual Maintenance Fee:

Fee Number	Air Contaminant Source	Multiplier	Units Of Measure
1364	1364 Crude Oil Pipeline - Facility with Over 500,000 BBLS Storage Capacity		

SIC Codes:

4612	Crude petroleum pipelines	AI 4634
4612	Crude petroleum pipelines	UNF 001

EMISSION RATES FOR CRITERIA POLLUTANTS AND CO2e

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

	PM10			PM2.5			SO2			NOx		
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
LOOP Port Complex												
EQT 0003 1-78												
EQT 0004 5-78												
EQT 0006 11-78												
EQT 0007 12-78												
EQT 0008 13-78												
EQT 0009 15-78	0.56	0.56	0.03	0.56	0.56	0.03	0.33	0.33	0.02	19.32	19.32	0.97
EQT 0011 17-78	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81
EQT 0012 18-78	0.60	0.60	0.03	0.60	0.60	0.03	0.35	0.35	0.02	20.64	20.64	1.03
EQT 0014 20-78	0.60	0.60	0.03	0.60	0.60	0.03	0.56	0.56	0.03	8.49	8.49	0.42
EQT 0015 21-78	0.24	0.24	0.01	0.24	0.24	0.01	0.22	0.22	0.01	3.35	3.35	0.17
EQT 0016 23-88												
EQT 0017 24-88												
EQT 0018 35-88	0.88	0.88	0.04	0.88	0.88	0.04	0.82	0.82	0.04	12.40	12.40	0.62
EQT 0019 38-91	1.10	1.10	0.06	1.10	1.10	0.06	1.03	1.03	0.05	15.50	15.50	0.78
EQT 0020 5-99	0.77	0.77	0.04	0.77	0.77	0.04	0.44	0.44	0.02	26.40	26.40	1.32
EQT 0021 1-07	1.03	1.03	0.05	1.03	1.03	0.05	0.96	0.96	0.05	14.57	14.57	0.73
EQT 0022 2-07	1.03	1.03	0.05	1.03	1.03	0.05	0.96	0.96	0.05	14.57	14.57	0.73
EQT 0023 3-07	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81
EQT 0024 4-07	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81
EQT 0025 5-07	0.59	0.59	0.03	0.59	0.59	0.03	0.55	0.55	0.03	8.31	8.31	0.42
EQT 0026 6-07	0.37	0.37	0.02	0.37	0.37	0.02	0.34	0.34	0.02	5.21	5.21	0.26
EQT 0047 1-10	0.64	0.64	0.03	0.64	0.64	0.03	1.07	1.07	0.05	4.99	4.99	0.25
EQT 0059 1-16	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81

EMISSION RATES FOR CRITERIA POLLUTANTS AND CO2e

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

Subject Item	CO			VOC		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
LOOP Port Complex						
EQT 0003 1-78				0.78	0.78	3.42
EQT 0004 5-78				<0.01	<0.01	<0.01
EQT 0006 11-78				0.10	0.10	0.46
EQT 0007 12-78				0.32	0.32	1.39
EQT 0008 13-78				0.10	0.10	0.46
EQT 0009 15-78	4.43	4.43	0.22	0.57	0.57	0.03
EQT 0011 17-78	3.69	3.69	0.18	0.47	0.47	0.02
EQT 0012 18-78	4.73	4.73	0.24	0.61	0.61	0.03
EQT 0014 20-78	1.83	1.83	0.09	0.68	0.68	0.03
EQT 0015 21-78	0.72	0.72	0.04	0.27	0.27	0.01
EQT 0016 23-88				0.06	0.06	0.27
EQT 0017 24-88				0.06	0.06	0.27
EQT 0018 35-88	2.67	2.67	0.13	0.99	0.99	0.05
EQT 0019 38-91	3.34	3.34	0.17	1.24	1.24	0.06
EQT 0020 5-99	6.05	6.05	0.30	0.78	0.78	0.04
EQT 0021 1-07	3.14	3.14	0.16	1.16	1.16	0.06
EQT 0022 2-07	3.14	3.14	0.16	1.16	1.16	0.06
EQT 0023 3-07	3.69	3.69	0.18	0.47	0.47	0.02
EQT 0024 4-07	3.69	3.69	0.18	0.47	0.47	0.02
EQT 0025 5-07	1.79	1.79	0.09	0.66	0.66	0.03
EQT 0026 6-07	1.12	1.12	0.06	0.41	0.41	0.02
EQT 0047 1-10	0.62	0.62	0.03	0.07	0.07	<0.01
EQT 0059 1-16	3.69	3.69	0.18	0.47	0.47	0.02

EMISSION RATES FOR CRITERIA POLLUTANTS AND CO2e

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

	PM10			PM2.5			SO2			NOx		
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
LOOP Port Complex												
FUG 0001 10-78												
GRP 0003 TANK CAP												

EMISSION RATES FOR CRITERIA POLLUTANTS AND CO2e

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

	CO			VOC		
Subject Item	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
LOOP Port Complex						
FUG 0001 10-78				0.06	0.06	0.28
GRP 0003 TANK CAP				93.88		411.19

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote.

EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 4634 - LOOP LLC - LOOP P ort Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

Emission Pt.	Pollutant	Avg lb/hr	Max lb/hr	Tons/Year
EQT 0003 1-78	2,2,4-Trimethylpentane	<0.001	<0.001	<0.01
	Benzene	0.005	0.005	0.02
	Ethyl benzene	<0.01	<0.01	<0.01
	n-Hexane	0.005	0.005	0.02
	Toluene	0.002	0.002	0.01
	Xylene (mixed isomers)	<0.01	<0.01	<0.01
EQT 0006 11-78	Benzene	<0.01	<0.01	<0.01
	Ethyl benzene	<0.01	<0.01	<0.01
	Toluene	0.002	0.002	0.01
	Xylene (mixed isomers)	0.01	0.01	0.03
EQT 0007 12-78	2,2,4-Trimethylpentane	<0.001	<0.001	<0.01
	Benzene	0.002	0.002	<0.01
	Cumene	<0.01	<0.01	<0.01
	Ethyl benzene	0.001	0.001	<0.01
	n-Hexane	0.001	0.001	<0.01
	Toluene	0.003	0.003	0.01
	Xylene (mixed isomers)	0.004	0.004	0.02
EQT 0008 13-78	Benzene	<0.01	<0.01	<0.01
	Ethyl benzene	<0.01	<0.01	<0.01
	Toluene			0.01
	Xylene (mixed isomers)	0.01	0.01	0.03
EQT 0016 23-88	Benzene	<0.01	<0.01	<0.01
	n-Hexane	<0.01	<0.01	0.01
	Toluene	<0.01	<0.01	<0.01
EQT 0017 24-88	Benzene	<0.01	<0.01	<0.01
	n-Hexane	<0.01	<0.01	<0.01
	Toluene	<0.01	<0.01	<0.01
FUG 0001 10-78	Benzene	<0.001	<0.001	<0.01
	Ethyl benzene	<0.001	<0.001	<0.01
	n-Hexane	<0.001	<0.001	<0.01
	Toluene	<0.001	<0.001	<0.01
	Xylene (mixed isomers)	<0.001	<0.001	<0.01
GRP 0003 TANK CAP	2,2,4-Trimethylpentane	0.05		0.22
	Benzene	0.55		2.41

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EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 4634 - LOOP LLC - LOOP P ort Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

Emission Pt.	Pollutant	Avg lb/hr	Max lb/hr	Tons/Year
GRP 0003 TANK CAP	Cumene	0.01		0.03
	Ethyl benzene	0.05		0.22
	n-Hexane	0.58		2.55
	Toluene	0.30		1.30
	Xylene (mixed isomers)	0.16		0.69
UNF 0001 LPC	2,2,4-Trimethylpentane			0.22
	Benzene			2.48
	Cumene			0.04
	Ethyl benzene			0.26
	n-Hexane			2.60
	Toluene			1.36
	Xylene (mixed isomers)			0.78

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote. Emission rates attributed to the UNF reflect the sum of the TAP/HAP limits of the individual emission points (or caps) under this permit, but do not constitute an emission cap.

SPECIFIC REQUIREMENTS

AI ID: 4634 - LOOP LLC - LOOP Port Complex
Activity Number: PER20160001
Permit Number: 1560-00027-V2
Air - Title V Significant Modification

CRG 0001 GP - Generators and Pumps

Group Members: EQT 0009 EQT 0011 EQT 0012 EQT 0014 EQT 0015 EQT 0018 EQT 0019 EQT 0020 EQT 0021 EQT 0022 EQT 0023 EQT 0024 EQT 0025 EQT 0026

1	[40 CFR 63.6603(a)]	Change oil and filter every 500 hours of operation or annually, whichever comes first. Subpart ZZZZ. [40 CFR 63.6603(a)]
2	[40 CFR 63.6603(a)]	Equipment/operational data monitored by visual inspection/determination annually or every 1,000 hours of operation, whichever comes first. Inspect air cleaner. Subpart ZZZZ. [40 CFR 63.6603(a)] Which Months: All Year Statistical Basis: None specified
3	[40 CFR 63.6603(a)]	Equipment/operational data monitored by visual inspection/determination annually or every 500 hours of operation, whichever comes first. Inspect all hoses and belts, and replace as necessary. Subpart ZZZZ. [40 CFR 63.6603(a)] Which Months: All Year Statistical Basis: None specified
4	[40 CFR 63.6603(a)]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. Subpart ZZZZ. [40 CFR 63.6603(a), 40 CFR 63.6625(h)]
5	[40 CFR 63.6605(a)]	Be in compliance with emission limitations and operating limitations in 40 CFR 63 Subpart ZZZZ at all times. Subpart ZZZZ. [40 CFR 63.6605(a)]
6	[40 CFR 63.6605(b)]	Operate and maintain at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. Subpart ZZZZ. [40 CFR 63.6605(b)]
7	[40 CFR 63.6625(e)]	Operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. Subpart ZZZZ. [40 CFR 63.6625(e)]
8	[40 CFR 63.6625(f)]	Install a non-resettable hour meter. Subpart ZZZZ. [40 CFR 63.6625(f)]
9	[40 CFR 63.6640(a)]	Demonstrate continuous compliance with each applicable emission limitation and operating limitation in 40 CFR 63 Subpart ZZZZ Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d according to methods specified in 40 CFR 63 Subpart ZZZZ Table 6. Subpart ZZZZ. [40 CFR 63.6640(a)]
10	[40 CFR 63.6640(f)(1)(ii)]	Operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Limit maintenance checks and readiness testing to 100 hours per year. Subpart ZZZZ. [40 CFR 63.6640(f)(1)(ii)]
11	[40 CFR 63.6640(f)(1)(iii)]	Operate up to 50 hours per year in non-emergency situations, but count those 50 hours towards the 100 hours per year provided for maintenance and testing. Do not use the 50 hours per year for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that the emergency engine may be operated for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. Do not operate for more than 30 minutes prior to the time when the emergency condition is expected to occur, and terminate the engine operation immediately after the facility is notified that the emergency condition is no longer imminent. Count the 15 hours per year of demand response operation as part of the 50 hours of operation per year provided for non-emergency situations. Subpart ZZZZ. [40 CFR 63.6640(f)(1)(iii)]
12	[40 CFR 63.6655]	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in 40 CFR 63.6655(a) through (f), as applicable. Subpart ZZZZ.

CRG 0001 GP - Generators and Pumps

13	[LAC 33:III.1101.B]	Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: None specified
14	[LAC 33:III.1311.C]	Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: Six-minute average

CRG 0002 STKS - Storage Tanks

Group Members: EQT 0027 EQT 0028 EQT 0029 EQT 0030 EQT 0031 EQT 0032 EQT 0033 EQT 0034 EQT 0035 EQT 0036 EQT 0037 EQT 0038 EQT 0040 EQT 0042 EQT 0043 EQT 0048 EQT 0049 EQT 0050 EQT 0051 EQT 0052 EQT 0053 EQT 0054 EQT 0055 EQT 0056 EQT 0057 EQT 0058

15	[40 CFR 60.112b(a)(2)(ii)]	Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, equip each opening in the roof with a gasketed cover, seal, or lid and maintain in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Close automatic bleeder vents at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Set rim vents to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Equip automatic bleeder vents and rim space vents with gaskets. Provide each emergency roof drain with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. Subpart Kb. [40 CFR 60.112b(a)(2)(ii)]
16	[40 CFR 60.112b(a)(2)]	Equip with an external floating roof consisting of a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Equip with a closure device between the wall of the storage vessel and the roof edge. The closure device consists of two seals, secondary above the primary. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the primary seal shall completely cover the annular space between the edge of the floating roof and tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113b(b)(4). The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Subpart Kb. [40 CFR 60.112b(a)(2)]
17	[40 CFR 60.113b(b)(3)]	Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in 40 CFR 60.113b(b)(4). Subpart Kb. [40 CFR 60.113b(b)(3)]
18	[40 CFR 60.113b(b)(4)(i)(A)]	One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface. Subpart Kb. [40 CFR 60.113b(b)(4)(i)(A)]
19	[40 CFR 60.113b(b)(4)(i)(B)]	There are to be no holes, tears, or other openings in the shoe, primary seal fabric, or seal envelope. Subpart Kb. [40 CFR 60.113b(b)(4)(i)(B)]
20	[40 CFR 60.113b(b)(4)(i)]	Seal gap area <= 212 cm^2/m of tank diameter (accumulated area) for gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal. Subpart Kb. [40 CFR 60.113b(b)(4)(i)] Which Months: All Year Statistical Basis: None specified

CRG 0002 STKS - Storage Tanks

21	[40 CFR 60.113b(b)(4)(i)]	Seal gap width <= 3.81 cm for the width of any portion of any gap between the tank wall and the mechanical shoe or liquid-mounted primary seal. Subpart Kb. [40 CFR 60.113b(b)(4)(i)] Which Months: All Year Statistical Basis: None specified
22	[40 CFR 60.113b(b)(4)(ii)(A)]	Install the secondary seal above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 60.113b(b)(2)(iii). Subpart Kb. [40 CFR 60.113b(b)(4)(ii)(A)]
23	[40 CFR 60.113b(b)(4)(ii)(B)]	Seal gap area <= 21.2 cm^2/m of tank diameter (accumulated area) for gaps between the tank wall and the secondary seal. Subpart Kb. [40 CFR 60.113b(b)(4)(ii)(B)] Which Months: All Year Statistical Basis: None specified
24	[40 CFR 60.113b(b)(4)(ii)(B)]	Seal gap width <= 1.27 cm for the width of any portion of any gap between the tank wall and the secondary seal. Subpart Kb. [40 CFR 60.113b(b)(4)(ii)(B)] Which Months: All Year Statistical Basis: None specified
25	[40 CFR 60.113b(b)(4)(ii)(C)]	There are to be no holes, tears, or other openings in the secondary seal or seal fabric. Subpart Kb. [40 CFR 60.113b(b)(4)(ii)(C)]
26	[40 CFR 60.113b(b)(4)]	Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in 40 CFR 60.113b(b)(4) (i) and (ii) except as specified in 40 CFR 60.113b(b)(4)(iii). Subpart Kb. [40 CFR 60.113b(b)(4)]
27	[40 CFR 60.113b(b)(5)]	Submit notification: Due at least 30 days in advance of any gap measurements required by 40 CFR 60.113b(b)(1) to afford DEQ the opportunity to have an observer present. Subpart Kb. [40 CFR 60.113b(b)(5)]
28	[40 CFR 60.113b(b)(6)(i)]	If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL. Subpart Kb. [40 CFR 60.113b(b)(6)(i)]
29	[40 CFR 60.113b(b)(6)(ii)]	Submit notification in writing: Due at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(6) to afford DEQ an opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph 40 CFR 60.113b(b)(6) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, notify DEQ at least 7 days prior to the refilling of the storage vessel. Notify by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, submit notification in writing including the written documentation and send by express mail so that it is received by DEQ at least 7 days prior to the refilling. Subpart Kb. [40 CFR 60.113b(b)(6)(ii)]
30	[40 CFR 60.113b(b)(6)]	Tank roof and seals monitored by visual inspection/determination at the regulation's specified frequency. Inspect the external floating roof, the primary seal, the secondary seal, and fittings each time the storage vessel is emptied and degassed. Subpart Kb. [40 CFR 60.113b(b)(6)] Which Months: All Year Statistical Basis: None specified
31	[40 CFR 60.115b(b)(1)]	Submit a report: Due to DEQ as an attachment to the notification required by 40 CFR 60.7(a)(3). This report shall describe the control equipment and certify that the control equipment meets the specifications of 40 CFR 60.112b(a)(2) and 60.113b(b)(2), (b)(3), and (b)(4). Keep copies of all reports for at least two years. Subpart Kb. [40 CFR 60.115b(b)(1)]
32	[40 CFR 60.115b(b)(2)]	Submit a report: Due to DEQ within 60 days of performing the seal gap measurements required by 40 CFR 60.113b(b)(1). The report shall contain: 1) the date of measurement, 2) the raw data obtained in the measurement, 3) the calculations described in 40 CFR 60.113b(b)(2) and (b)(3). Keep copies of all reports for at least two years. Subpart Kb. [40 CFR 60.115b(b)(2)]

CRG 0002 STKS - Storage Tanks

33	[40 CFR 60.115b(b)(3)]	Gap measurement(s) recordkeeping by electronic or hard copy upon each occurrence of gap measurement performance, as required by 40 CFR 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain: 1) the date of measurement, 2) the raw data obtained in the measurement, 3) the calculations described in 40 CFR 60.113b(b)(2) and (b)(3). Keep copies of all records for at least two years. Subpart Kb. [40 CFR 60.115b(b)(3)]
34	[40 CFR 60.115b(b)(4)]	Submit a report: Due to DEQ within 30 days after each seal gap measurement that detects gaps exceeding the limitations specified by 40 CFR 60.113b(b)(4). The report will identify the vessel and contain the information specified in 40 CFR 60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair. Keep copies of all reports for at least two years. Subpart Kb. [40 CFR 60.115b(b)(4)]
35	[40 CFR 60.116b(b)]	Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Keep copies of all records for the life of the source as specified by 40 CFR 60.116b(a). Subpart Kb. [40 CFR 60.116b(b)]
36	[40 CFR 60.116b(c)]	VOL storage data recordkeeping by electronic or hard copy at the approved frequency. Records consist of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. Keep copies of all records for at least two years. Subpart Kb. [40 CFR 60.116b(c)]
37	[LAC 33:III.2103.B]	Equip with a submerged fill pipe.
38	[LAC 33:III.2103.D.2.a]	Seal closure devices required in LAC 33:III.2103.D shall have no visible holes, tears, or other openings in the seals or seal fabric.
39	[LAC 33:III.2103.D.2.b]	Seal closure devices required in LAC 33:III.2103.D shall be intact and uniformly in place around the circumference of the floating roof and the tank wall.
40	[LAC 33:III.2103.D.2.c]	Seal gap area <= 1 in^2/ft of tank diameter (6.5 cm2/0.3 m), for gaps between the secondary seal and tank wall that exceed 1/8 inch (0.32 cm) in width. Which Months: All Year Statistical Basis: None specified
41	[LAC 33:III.2103.D.2.d]	Seal gap area <= 10 in^2/ft of tank diameter (65 cm2/0.3 m), for gaps between the primary seal and tank wall that exceed 1/8 inch (0.32 cm) in width. Which Months: All Year Statistical Basis: None specified
42	[LAC 33:III.2103.D.2.e]	Equipment/operational data recordkeeping by electronic or hard copy upon occurrence of event. Keep records of conditions that are not up to the standards described in LAC 33:III.2103.D.2, and the date(s) that the standards are not met. Notify the administrative authority within seven days of noncompliance with LAC 33:III.2103.D.2.
43	[LAC 33:III.2103.D.2.e]	Initiate repairs of seals within seven working days of recognition of defective conditions by ordering appropriate parts, to avoid noncompliance with LAC 33:III.2103. Complete repairs within three months of the ordering of the repair parts.
44	[LAC 33:III.2103.D.2.e]	Primary seals: Seal gap area & width monitored by measurement once every five years at any tank level, provided the roof is off its legs. Which Months: All Year Statistical Basis: None specified
45	[LAC 33:III.2103.D.2.e]	Secondary Seal or closure mechanism monitored by visual inspection/determination semiannually. Which Months: All Year Statistical Basis: None specified
46	[LAC 33:III.2103.D.2.e]	Secondary seals: Seal gap area & width monitored by measurement annually at any tank level, provided the roof is off its legs. Which Months: All Year Statistical Basis: None specified

CRG 0002 STKS - Storage Tanks

47	[LAC 33:III.2103.D.3]	Provide all openings in the external floating roof (except for automatic bleeder vents, rim space vent, and leg sleeves) with a projection below the liquid surface. Equip each opening in the roof (except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves) with a cover, seal or lid that is to be maintained in a closed position at all times except when the device is in actual use. Keep automatic bleeder vents closed at all times except when the roof is being floated off the roof leg supports. Set rim vents to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Equip any emergency roof drain with a slotted membrane fabric cover or equivalent cover that covers at least 90 percent of the opening.
48	[LAC 33:III.2103.D]	Equip with an external floating roof consisting of a pontoon type roof, double deck type roof, or external floating cover which will rest or float on the surface of the liquid contents and is equipped with a primary closure seal to close the space between the roof edge and tank wall and a continuous secondary seal (a rim mounted secondary) extending from the floating roof to the tank wall.
49	[LAC 33:III.2103.H.1]	Determine compliance with LAC 33:III.2103.D.2 and 4 using the methods in LAC 33:III.2103.H.1.
50	[LAC 33:III.2103.H.3]	Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e.
51	[LAC 33:III.2103.I]	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.
52	[LAC 33:III.509]	BACT for VOC emissions from normal operations for Tanks EQT0048 through EQT0058 is to equip tanks with External Floating Roofs that meet requirements of 40 CFR 60 Subpart Kb.
53	[LAC 33:III.509]	BACT for VOC emissions from tank cleaning for Tanks EQT0048 through EQT0058 is to limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and to use a thermal oxidation device to control emissions from the tank cleaning operations.
54	[LAC 33:III.509]	BACT for VOC emissions from tank landings for Tanks EQT0048 through EQT0058 is to comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event.

EQT 0003 1-78 - Crude Relief Tank (Clovelly Dome)

55	[40 CFR 60.112a(a)(1)(i)(A)]	Seal gap area <= 10.0 in^2/ft (212 sq cm/meter) of tank diameter for the accumulated area of gaps between the tank wall and the mechanical shoe seal or liquid-mounted primary seal. Subpart Ka. [40 CFR 60.112a(a)(1)(i)(A)] Which Months: All Year Statistical Basis: None specified
56	[40 CFR 60.112a(a)(1)(i)(A)]	Seal gap width <= 1.5 in (3.81 cm) for the width of any portion of any gap between the tank wall and the mechanical shoe seal or liquid-mounted primary seal. Subpart Ka. [40 CFR 60.112a(a)(1)(i)(A)] Which Months: All Year Statistical Basis: None specified
57	[40 CFR 60.112a(a)(1)(i)(C)]	One end of the primary seal metallic shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 24 inches (61 centimeters) above the stored liquid surface. Subpart Ka. [40 CFR 60.112a(a)(1)(i)(C)]
58	[40 CFR 60.112a(a)(1)(i)(D)]	There are to be no holes, tears, or other openings in the shoe, primary seal fabric, or seal envelope. Subpart Ka. [40 CFR 60.112a(a)(1)(i)(D)]
59	[40 CFR 60.112a(a)(1)(i)]	The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal. Subpart Ka. [40 CFR 60.112a(a)(1)(i)]
60	[40 CFR 60.112a(a)(1)(ii)(A)]	Install the secondary seal above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 40 CFR 60.112a(a)(1)(ii)(B). Subpart Ka. [40 CFR 60.112a(a)(1)(ii)(A)]

EQT 0003 1-78 - Crude Relief Tank (Clovelly Dome)

61	[40 CFR 60.112a(a)(1)(ii)(B)]	Seal gap area <= 1.0 in^2/ft (21.2 sq cm/meter) of tank diameter for the accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal. Subpart Ka. [40 CFR 60.112a(a)(1)(ii)(B)] Which Months: All Year Statistical Basis: None specified
62	[40 CFR 60.112a(a)(1)(ii)(B)]	Seal gap width <= 0.5 in (1.27 cm) for the width of any portion of any gap between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal. Subpart Ka. [40 CFR 60.112a(a)(1)(ii)(B)] Which Months: All Year Statistical Basis: None specified
63	[40 CFR 60.112a(a)(1)(ii)(C)]	There are to be no holes, tears or other openings in the secondary seal or seal fabric. Subpart Ka. [40 CFR 60.112a(a)(1)(ii)(C)]
64	[40 CFR 60.112a(a)(1)(iii)]	Each opening in the roof except for automatic bleeder vents and rim space vents is to provide a projection below the liquid surface. Equip each opening in the roof except for automatic bleeder vents, rim space vents and leg sleeves with a cover, seal or lid and maintain in a closed position at all times (i.e., no visible gap) except when the device is in actual use or as described in 40 CFR 60.112a(a)(1)(iv). Close automatic bleeder vents at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. Set rim vents to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Subpart Ka. [40 CFR 60.112a(a)(1)(iii)]
65	[40 CFR 60.112a(a)(1)(iv)]	Provide each emergency roof drain with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. Subpart Ka. [40 CFR 60.112a(a)(1)(iv)]
66	[40 CFR 60.112a(a)(1)]	Equip with an external floating roof consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in 40 CFR 60.112a(a)(1)(ii)(D), the closure device is to consist of two seals, one (secondary) above the other (primary). The roof is to be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Subpart Ka. [40 CFR 60.112a(a)(1)]
67	[40 CFR 60.113a(a)(1)(i)(A)]	Seal gap area & width monitored by measurement at the regulation's specified frequency. Determine the gap areas and maximum gap widths between the primary seal and the tank wall within 60 days of the initial fill with petroleum liquid and at least once every 5 years thereafter using the procedures in 40 CFR 60.113a(a)(1)(ii). Accomplish all primary seal inspections or gap measurements which require the removal or dislodging of the secondary seal as rapidly as possible and replace the secondary seal as soon as possible. Subpart Ka. [40 CFR 60.113a(a)(1)(i)(A)] Which Months: All Year Statistical Basis: None specified
68	[40 CFR 60.113a(a)(1)(i)(B)]	Seal gap area & width monitored by measurement at the regulation's specified frequency. Determine the gap areas and maximum gap widths between the secondary seal and the tank wall within 60 days of the initial fill with petroleum liquid and at least once every year thereafter using the procedures in 40 CFR 60.113a(a)(1)(ii). Subpart Ka. [40 CFR 60.113a(a)(1)(i)(B)] Which Months: All Year Statistical Basis: None specified
69	[40 CFR 60.113a(a)(1)(i)(D)]	Gap measurement(s) recordkeeping by electronic or hard copy upon each occurrence of gap measurement performance. Each record shall identify the vessel on which the measurement was performed and shall contain the date of the seal gap measurement, the raw data obtained in the measurement process required by 40 CFR 60.113a(a)(1)(ii) and the calculation required by 40 CFR 60.113a(a)(1)(iii). Keep records of each gap measurement at the plant for a period of at least 2 years following the date of measurement. Subpart Ka. [40 CFR 60.113a(a)(1)(i)(D)]

EQT 0003 1-78 - Crude Relief Tank (Clovelly Dome)

70	[40 CFR 60.113a(a)(1)(i)(E)]	Submit report: Due to DEQ within 60 days of the date of seal gap measurements, if either the seal gap calculated in accord with 40 CFR 60.113a(a)(1)(iii) or the measured maximum seal gap exceeds the limitations specified by 40 CFR 60.112a. The report shall identify the vessel and list each reason why the vessel did not meet the specifications of 40 CFR 60.112a. The report shall also describe the actions necessary to bring the storage vessel into compliance with the specifications of 40 CFR 60.112a. Subpart Ka. [40 CFR 60.113a(a)(1)(i)(E)]
71	[40 CFR 60.113a(a)(1)(iv)]	Submit notification: Due to DEQ at least 30 days prior to the gap measurement to afford DEQ to have an observer present. Subpart Ka. [40 CFR 60.113a(a)(1)(iv)]
72	[40 CFR 60.115a]	Petroleum liquid storage data recordkeeping by electronic or hard copy continuously. Maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period, except as provided in 40 CFR 60.115a(d). Subpart Kat all timesa.
73	[LAC 33:III.2103.B]	Equip with a submerged fill pipe.
74	[LAC 33:III.2103.D.2.a]	Seal closure devices required in LAC 33:III.2103.D shall have no visible holes, tears, or other openings in the seals or seal fabric.
75	[LAC 33:III.2103.D.2.b]	Seal closure devices required in LAC 33:III.2103.D shall be intact and uniformly in place around the circumference of the floating roof and the tank wall.
76	[LAC 33:III.2103.D.2.c]	Seal gap area <= 1 in^2/ft of tank diameter (6.5 cm2/0.3 m), for gaps between the secondary seal and tank wall that exceed 1/8 inch (0.32 cm) in width. Which Months: All Year Statistical Basis: None specified
77	[LAC 33:III.2103.D.2.d]	Seal gap area <= 10 in^2/ft of tank diameter (65 cm2/0.3 m), for gaps between the primary seal and tank wall that exceed 1/8 inch (0.32 cm) in width. Which Months: All Year Statistical Basis: None specified
78	[LAC 33:III.2103.D.2.e]	Equipment/operational data recordkeeping by electronic or hard copy upon occurrence of event. Keep records of conditions that are not up to the standards described in LAC 33:III.2103.D.2, and the date(s) that the standards are not met. Notify the administrative authority within seven days of noncompliance with LAC 33:III.2103.D.2.
79	[LAC 33:III.2103.D.2.e]	Initiate repairs of seals within seven working days of recognition of defective conditions by ordering appropriate parts, to avoid noncompliance with LAC 33:III.2103. Complete repairs within three months of the ordering of the repair parts.
80	[LAC 33:III.2103.D.2.e]	Primary seals: Seal gap area & width monitored by measurement once every five years at any tank level, provided the roof is off its legs. Which Months: All Year Statistical Basis: None specified
81	[LAC 33:III.2103.D.2.e]	Secondary Seal or closure mechanism monitored by visual inspection/determination semiannually. Which Months: All Year Statistical Basis: None specified
82	[LAC 33:III.2103.D.2.e]	Secondary seals: Seal gap area & width monitored by measurement annually at any tank level, provided the roof is off its legs. Which Months: All Year Statistical Basis: None specified
83	[LAC 33:III.2103.D.3]	Provide all openings in the external floating roof (except for automatic bleeder vents, rim space vent, and leg sleeves) with a projection below the liquid surface. Equip each opening in the roof (except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves) with a cover, seal or lid that is to be maintained in a closed position at all times except when the device is in actual use. Keep automatic bleeder vents closed at all times except when the roof is being floated off the roof leg supports. Set rim vents to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Equip any emergency roof drain with a slotted membrane fabric cover or equivalent cover that covers at least 90 percent of the opening.

EQT 0003 1-78 - Crude Relief Tank (Clovelly Dome)

84	[LAC 33:III.2103.D]	Equip with an external floating roof consisting of a pontoon type roof, double deck type roof, or external floating cover which will rest or float on the surface of the liquid contents and is equipped with a primary closure seal to close the space between the roof edge and tank wall and a continuous secondary seal (a rim mounted secondary) extending from the floating roof to the tank wall.
85	[LAC 33:III.2103.H.1]	Determine compliance with LAC 33:III.2103.D.2 and 4 using the methods in LAC 33:III.2103.H.1.
86	[LAC 33:III.2103.H.3]	Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e.
87	[LAC 33:III.2103.I]	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.

EQT 0016 23-88 - Tank 1 Operations Center (Clovelly Dome)

88	[40 CFR 63.11116(a)]	Permittee shall not handle dispensing of gasoline in a manner that would result in vapor releases to the atmosphere for extended period of time. The following measures, not all inclusive, shall be undertaken: a) minimize gasoline spills; b) clean up spills as expeditiously as practicable; c) cover all open gasoline containers and all gasoline storage tank ill-pipes with a gasketed seal when not in use; d) minimize gasoline sent to open waste collection system that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators; and e) keep records available within 24 hours of a request by the Administrator to document gasoline throughput. [40 CFR 63.11116(a), 40 CFR 63.11116(b)]
89	[LAC 33:III.2103.A]	Equip with a submerged fill pipe.
90	[LAC 33:III.2103.H.3]	Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e.
91	[LAC 33:III.2103.I]	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.

EQT 0017 24-88 - Tank 2 Operations Center (Clovelly Dome)

92	[40 CFR 63.11116(a)]	Permittee shall not handle dispensing of gasoline in a manner that would result in vapor releases to the atmosphere for extended period of time. The following measures, not all inclusive, shall be undertaken: a) minimize gasoline spills; b) clean up spills as expeditiously as practicable; c) cover all open gasoline containers and all gasoline storage tank ill-pipes with a gasketed seal when not in use; d) minimize gasoline sent to open waste collection system that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators; and e) keep records available within 24 hours of a request by the Administrator to document gasoline throughput. [40 CFR 63.11116(a), 40 CFR 63.11116(b)]
93	[LAC 33:III.2103.A]	Equip with a submerged fill pipe.
94	[LAC 33:III.2103.H.3]	Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e.
95	[LAC 33:III.2103.I]	Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1 - 7, as applicable.

EQT 0047 1-10 - 520 hp Emergency Generator

EQT 0047 1-10 - 520 hp Emergency Generator

96	[40 CFR 60.4205(b)]	Comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power. Subpart IIII. [40 CFR 60.4205(b)]
97	[40 CFR 60.4206]	Operate and maintain stationary CI ICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. Subpart IIII.
98	[40 CFR 60.4207(b)]	Beginning October 1, 2010, use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel. Subpart IIII. [40 CFR 60.4207(b)]
99	[40 CFR 60.4209(a)]	Operating time monitored by hour/time monitor continuously during operation. Install a non-resettable hour meter prior to startup of the engine. Subpart IIII. [40 CFR 60.4209(a)] Which Months: All Year Statistical Basis: None specified
100	[40 CFR 60.4211(a)(1)]	Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(1)]
101	[40 CFR 60.4211(a)(2)]	Change only those emission-related settings that are permitted by the manufacturer, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(2)]
102	[40 CFR 60.4211(a)(3)]	Meet the requirements of 40 CFR 89, 94 and/or 1068, as applicable, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(3)]
103	[40 CFR 60.4211(c)]	Ensure engine is certified to the emission standards in 40 CFR 60.4205(b), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. Install and configure according to the manufacturer's specifications. Subpart IIII. [40 CFR 60.4211(c)]
104	[40 CFR 60.4211(f)]	Operate according to the requirements in 40 CFR 60.4211(f)(1) through (f)(3). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (f)(3), is prohibited. Subpart IIII. [40 CFR 60.4211(f)]
105	[40 CFR 60.4214(b)]	Operating time recordkeeping by electronic or hard copy upon occurrence of event. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engine and the reason the engine was in operation during that time. Subpart IIII. [40 CFR 60.4214(b)]
106	[40 CFR 63.6590(c)]	Meet the requirements of 40 CFR 60 Subpart IIII for compression ignition engines or 40 CFR 60 Subpart JJJJ for spark ignition engines. Subpart ZZZZ. [40 CFR 63.6590(c)]
107	[LAC 33:III.1101.B]	Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: None specified
108	[LAC 33:III.1311.C]	Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: Six-minute average

EQT 0059 1-16 - Standby Generator (Clovelly Dome)

EQT 0059 1-16 - Standby Generator (Clovelly Dome)

109	[40 CFR 60.4205(b)]	Comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power. Subpart IIII. [40 CFR 60.4205(b)]
110	[40 CFR 60.4206]	Operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 40 CFR 60.4205 over the entire life of the engine. Subpart IIII.
111	[40 CFR 60.4207(b)]	Use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. Subpart IIII. [40 CFR 60.4207(b)]
112	[40 CFR 60.4209(a)]	Operating time monitored by hour/time monitor continuously during operation. If the emergency engine meets the standards applicable to emergency engines, install a non-resettable hour meter prior to startup of the engine. Subpart IIII. [40 CFR 60.4209(a)] Which Months: All Year Statistical Basis: None specified
113	[40 CFR 60.4211(a)(1)]	Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(1)]
114	[40 CFR 60.4211(a)(2)]	Change only those emission-related settings that are permitted by the manufacturer, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(2)]
115	[40 CFR 60.4211(a)(3)]	Meet the requirements of 40 CFR 89, 94 and/or 1068, as applicable, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(a)(3)]
116	[40 CFR 60.4211(c)]	Ensure engine is certified to the emission standards in 40 CFR 60.4204(b), or 40 CFR 60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. Install and configure according to the manufacturer's emissions-related specifications, except as permitted in 40 CFR 60.4211(g). Subpart IIII. [40 CFR 60.4211(c)]
117	[40 CFR 60.4211(f)]	Operate according to the requirements in 40 CFR 60.4211(f)(1) through (f)(3). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (f)(3), is prohibited. Subpart IIII. [40 CFR 60.4211(f)]
118	[40 CFR 60.4214(b)]	Operating time recordkeeping by electronic or hard copy upon occurrence of event. If the emergency engine meets the standards applicable to emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engine and the reason the engine was in operation during that time. Subpart IIII. [40 CFR 60.4214(b)]
119	[40 CFR 63.6590(c)]	Meet the requirements of 40 CFR 60 Subpart IIII for compression ignition engines or 40 CFR 60 Subpart JJJJ for spark ignition engines. Subpart ZZZZ. [40 CFR 63.6590(c)]
120	[LAC 33:III.1101.B]	Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: None specified
121	[LAC 33:III.1311.C]	Opacity <= 20 percent, except for emissions that have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. Which Months: All Year Statistical Basis: Six-minute average

FUG 0001 10-78 - Fugitive Emissions (Clovelly Dome)

FUG 0001 10-78 - Fugitive Emissions (Clovelly Dome)

122	[LAC 33:III.2111]	Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment.

GRP 0003 TANK CAP - Crude Oil Storage Tank CAP (Clovelly Dome)

Group Members: EQT 0036 EQT 0037 EQT 0038 EQT 0040 EQT 0042 EQT 0043 EQT 0048 EQT 0049 EQT 0050 EQT 0051 EQT 0052 EQT 0053 EQT 0054 EQT 0055 EQT 0056 EQT 0057 EQT 0058 EQT 0027 EQT 0028 EQT 0029 EQT 0030 EQT 0031 EQT 0032 EQT 0033 EQT 0034 EQT 0035

123	[LAC 33:III.507.H.1.a]	Permittee shall demonstrate compliance with the capped VOC emission limit by maintaining the total calculated VOC emissions from all the tanks under this cap, including emssions from normal tank operations, tank landings, and tank cleanings, no more than 411.19 tons per year. The total VOC emissions from the tanks shall be calculated based on tank throughput, number of tank landings, and number of tank cleanings. Calculated monthly VOC emissions from all tanks shall be recorded each month. The total VOC emissions calculated for all the tanks for the last twelve months shall also be recorded each month. These records shall be kept on site and available for inspection by the Office of Environmental Compliance. The total calculated VOC emissions from the tanks above the maximum given in this specific requirement for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance. A report showing the overall calculated VOC emissions from the tanks shall be submitted to the Office of Environmental Compliance by April 30 for the preceding calendar year.

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124	[40 CFR 60.]	All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.
125	[40 CFR 63.6640(b)]	Report each instance in which each applicable emission limitation or operating limitation in 40 CFR 63 Subpart ZZZZ Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d were not met according to the requirements of 40 CFR 63.6650. Subpart ZZZZ. [40 CFR 63.6640(b)]
126	[40 CFR 63.6640(e)]	Report each instance in which the applicable requirements in 40 CFR 63 Subpart ZZZZ Table 8 were not met. Subpart ZZZZ. [40 CFR 63.6640(e)]
127	[40 CFR 63.6650(f)]	Report all deviations as defined in 40 CFR 63 Subpart ZZZZ in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). Subpart ZZZZ. [40 CFR 63.6650(f)]
128	[40 CFR 63.6660(a)]	Keep records in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). Subpart ZZZZ. [40 CFR 63.6660(a)]
129	[40 CFR 63.6660(b)]	Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, as specified in 40 CFR 63.10(b)(1). Subpart ZZZZ. [40 CFR 63.6660(b)]
130	[40 CFR 63.6660(c)]	Keep each record readily accessible in hard copy or electronic form on-site for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). Subpart ZZZZ. [40 CFR 63.6660(c)]
131	[40 CFR 63.]	All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A.
132	[LAC 33:III.1103]	Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited.

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133	[LAC 33:III.1303.B]	Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.
134	[LAC 33:III.1305]	Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.A.1-7.
135	[LAC 33:III.2113.A]	Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5.
136	[LAC 33:III.219]	Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.
137	[LAC 33:III.2901.D]	Discharges of odorous substances at or beyond property lines which cause a perceived odor intensity of six or greater on the specified eight point butanol scale as determined by Method 41 of LAC 33:III.2901.G are prohibited.
138	[LAC 33:III.2901.F]	If requested to monitor for odor intensity, take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G.
139	[LAC 33:III.509]	Comply with the requirements of PSD-LA-796 (M-1). This permit includes provisions of the Prevention of Significant Deterioration (PSD) review from Permit PSD-LA-796 (M-1).
140	[LAC 33:III.535]	Comply with the Part 70 General Conditions as set forth in LAC 33:III.535 and the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.535, LAC 33:III.537]
141	[LAC 33:III.5611.A]	Submit standby plan for the reduction or elimination of emissions during an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency: Due within 30 days after requested by the administrative authority.
142	[LAC 33:III.5611.B]	During an Air Pollution Alert, Air Pollution Warning or Air Pollution Emergency, make the standby plan available on the premises to any person authorized by the department to enforce these regulations.
143	[LAC 33:III.905]	Install air pollution control facilities whenever practically, economically, and technologically feasible. When facilities have been installed on a property, use them and diligently maintain them in proper working order whenever any emissions are being made which can be controlled by the facilities, even though the ambient air quality standards in affected areas are not exceeded.
144	[LAC 33:III.913]	Provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of emission limits.
145	[LAC 33:III.917.A]	Where, upon written application of the responsible person or persons, the administrative authority finds that by reason of exceptional circumstances strict conformity with any provisions of these regulations would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the administrative authority may permit a variance from these regulations.
146	[LAC 33:III.917.B]	No variance may permit or authorize the maintenance of a nuisance, or a danger to public health or safety.
147	[LAC 33:III.919]	Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 30th of April to the Office of Environmental Services, for the reporting period of the previous calendar year that coincides with period of ownership or operatorship, unless otherwise directed by DEQ. Submit both an emissions inventory and the certification statement required by LAC 33:III.919.F.1.c, separately for each AI, in a format specified by DEQ. Include the information specified in LAC 33:III.919.F.1.a through F.1.d.

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148	[LAC 33:III.927]	Report the unauthorized discharge of any air pollutant into the atmosphere in accordance with LAC 33:I.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. Submit written reports to the department pursuant to LAC 33:I.3925. Submit timely and appropriate follow-up reports detailing methods and procedures to be used to prevent similar atmospheric releases.
149	[LAC 33:III.929.A]	No person or group of persons shall allow particulate matter or gases to become airborne in amounts which cause the ambient air quality standards to be exceeded.

JOHN BEL EDWARDS
GOVERNOR

CHUCK CARR BROWN, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No.:

Agency Interest (AI) No.: 4634
Activity No.: PER20160002

Mr. Chris A. Labat
Vice President of Engineering and Technology
LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

RE: Prevention of Significant Deterioration (PSD) Permit PSD-LA-796 (M-1)
LOOP Port Complex, LOOP LLC
Cut Off, Lafourche Parish, Louisiana

Dear Mr. Labat:

Enclosed is your permit, PSD-LA-796 (M-1).

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Should you have any questions, contact Dr. Qingming Zhang of the Air Permits Division at (225) 219-3457.

Sincerely,

Elliott B. Vega
Assistant Secretary

_____
Date

EBV:qmz

c: US EPA Region VI

PUBLIC NOTICE
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)
LOOP LLC - LOOP PORT COMPLEX
PROPOSED PART 70 AIR OPERATING PERMIT MODIFICATION
AND PSD PERMIT MODIFICATION

The LDEQ, Office of Environmental Services, is accepting written comments on a Part 70 air operating permit modification and PSD permit modification for LOOP LLC, 137 Northpark Boulevard, Covington, Louisiana 70433 for the LOOP Port Complex. **The facility is located at 224 East 101st Place, Cut Off, Lafourche Parish.**

LOOP Port Complex is a pipeline terminal facility. It consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. LOOP LLC requested to add an additional five (5) crude oil storage tanks for its Clovelly Dome Storage Terminal expansion project. The overall tank capacity at the terminal will be increased to approximately 14 million barrels. The oil throughput at the terminal will be increased to 250 million barrels per year.

This permit was processed as an expedited permit in accordance with LAC 33:I.Chapter 18.

Estimated emissions from the facility, in tons per year (TPY), are as follows:

Pollutant	Before	After	Change
PM_{10}	0.49	0.50	+ 0.01
$PM_{2.5}$	0.49	0.50	+ 0.01
SO_2	0.43	0.43	--
NO_X	10.15	10.94	+ 0.79
CO	2.24	2.41	+ 0.17
VOC	437.54	418.26	- 19.28

A working draft of the proposed permit was submitted to the facility representative. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

Comments and requests for a public hearing or notification of the final decision can be submitted via personal delivery, U.S. mail, email, or fax. **Comments and requests for public hearings must be received by 4:30 pm CST, Wednesday, November 9, 2016.** Delivery may be made to the drop-box at 602 N. 5th St., Baton Rouge, LA 70802. U.S. Mail may be sent to LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. Emails may be submitted to DEQ.PUBLICNOTICES@LA.GOV and faxes sent to (225) 219-3309.

Please see additional instructions for comment submission, hand delivery and information regarding electronic submission at http://www.deq.louisiana.gov/portal/Default.aspx?tabid=2256 or call (225) 219-3276.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The permit application, proposed permits, and statement of basis are available for review at the LDEQ, Public Records Center, Room 128, 602 North 5th Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov.**

An additional copy may be reviewed at the Lafourche Parish Library - South Lafourche Branch, 16241 East Main Street, Cut Off, LA 70345.

Inquiries or requests for additional information regarding this permit action should be directed to Dr. Qingming Zhang,

LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3457.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at DEQ.PUBLICNOTICES@LA.GOV or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the proposed permits and statement of basis can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at http://louisiana.gov/Services/Email_Notifications_DEQ_PN/.

All correspondence should specify AI Number 4634, Permit Number 1560-00027-V2 and PSD-LA-796 (M-1), and Activity Number PER20160001 and PER20160002.

Scheduled Publication Date: October 5, 2016

Agency Interest No. 4634

PSD-LA-796 (M-1)

AUTHORIZATION TO CONSTRUCT AND OPERATE A MODIFIED MAJOR SOURCE PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE, LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental Regulatory Code, LAC 33:III.509,

LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

is authorized to construct the tank project at the LOOP Port Complex at

224 East 101st Place
Cut Off, Louisiana 70345

subject to the emissions limitations, monitoring requirements, and other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight on _____, 2018, unless physical on site construction has begun by such date, or binding agreements or contractual obligations to undertake a program of construction of the source are entered into by such date.

Signed this _____ day of _____, 2016.

Elliott B. Vega
Assistant Secretary
Office of Environmental Services
Louisiana Department of Environmental Quality

BRIEFING SHEET

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

PURPOSE

In addition to six (6) crude oil storage tanks proposed previously for the Clovelly Dome Storage Terminal expansion project, five (5) more crude oil storage tanks are proposed for the project with this permit modification.

RECOMMENDATION

Approval of the proposed construction and issuance of a permit modification.

REVIEWING AGENCY

Louisiana Department of Environmental Quality, Office of Environmental Services, Air Permits Division.

PROJECT DESCRIPTION

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved on July 30, 2015 under the Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796.

With this permit modification, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000 barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

TYPE OF REVIEW

This permit was reviewed in accordance with regulations for the Prevention of Significant Deterioration (PSD) for emissions of VOC. The selection of control technologies are based on the BACT analysis.

BEST AVAILABLE CONTROL TECHNOLOGY

VOC emissions are above PSD significance level and must undergo PSD analyses. The selection of control technology was based on the BACT analysis using a "top down" approach. BACT for all affected crude oil storage tanks (EQT048 through EQT058) is determined to be external floating roofs meeting the requirements of 40 CFR 60 Subpart Kb. BACT for storage tank landings is to comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event. BACT for storage tank cleaning is to limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and to use a thermal oxidation device to control emissions from the tank cleaning operations.

BRIEFING SHEET

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of ambient air quality for those pollutants emitted in significant amounts from a proposed major modification.

VOC emissions from the proposed facility will exceed 100 tons per year; therefore, an ambient air quality analysis and preconstruction monitoring are required for ozone. Based on the proposed site's proximity to an existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) and the meteorological factors that indicate this data is representative of existing air quality conditions at the proposed site, a waiver for preconstruction monitoring was granted. This monitoring station is approximately 38 miles north-west of the site location. The prevailing wind from the site is towards this monitor (from the southeast). For post-construction monitoring, LDEQ has approved the use of the Thibodaux, Lafourche Parish, LA ozone monitor.

ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. The project will not result in any significant secondary growth effects. No new permanent jobs will be created.

PROCESSING TIME

Application Dated:	June 10, 2016
Application Received:	June 10, 2016
Additional Information Dated:	September 15, 16 and 23, 2016
Effective Completeness Date:	September 19, 2016

PUBLIC NOTICE

A notice requesting public comment on the permit was published in The Advocate, Baton Rouge and in The Lafourche Gazette in Lafourche Parish on [date], 2016. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on [date], 2016. The draft permit was also submitted to US EPA Region VI on [date], 2016. All comments will be considered prior to a final permit decision.

PRELIMINARY DETERMINATION SUMMARY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)
June 5, 2015, Updated September 19, 2016

I. APPLICANT

LOOP LLC
137 Northpark Boulevard
Covington, Louisiana 70433

II. LOCATION

The LOOP Port Complex consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. The Clovelly Dome Storage Terminal is located at 224 East 101st Place in Cut Off, Louisiana. Approximate UTM coordinates are 764,302 kilometers East and 3,261,267 kilometers North in Zone 15.

III. PROJECT DESCRIPTION

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved on July 30, 2015 under the Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796.

With this permit modification, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000 barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

Potential emissions from the entire LOOP Port Complex (including emissions from GC XVII and insignificant activities), in tons per year, are:

PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO_2e
0.56	0.56	0.44	11.73	3.08	418.26	1,469

Except for VOC, potential emissions from the entire complex for any other PSD regulated pollutant are below PSD significance level. Therefore, it is not required to conduct PSD analyses for any PSD pollutant other than VOC.

VOC emission increase due to the Clovelly Dome Storage Terminal expansion project is over the PSD significance level (40 TPY) and there are no contemporaneous emission changes from the facility. Therefore, as determined previously in the initial PSD Permit PSD-LA-796, the Clovelly Dome Storage Terminal expansion project is subject to PSD review for VOC emissions.

IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for new major or modified major stationary sources requires review under Prevention of

Significant Deterioration regulations, 40 CFR 52.21. PSD review entails the following analyses:

A. A determination of the Best Available Control Technology (BACT);

B. An analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;

C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);

D. An analysis of the PSD increment consumption;

E. An analysis of the source related growth impacts;

F. An analysis of source related growth impacts on soils, vegetation, and visibility;

G. A Class I Area impact analysis; and

H. An analysis of the impact of toxic compound emissions.

A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

For this project, BACT analyses are required for VOC emissions from the project.

BACT analyses for VOC emissions from storage tanks

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054

29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from storage vessels include:

- Fixed roof tanks
- External floating roof tanks
- Internal floating roof tanks
- Closed vent system and control device

Fixed Roof (FR)

A FR tank consists of a cylindrical steel shell with a permanently affixed roof, which may vary in design from cone or dome shaped to flat. Emission losses from FR tanks are caused by changes in temperature, pressure, and liquid level changes. FR tanks are either freely vented or equipped with a pressure/vacuum vent. The latter allows the tanks to operate at a slight internal pressure or vacuum to prevent the release of vapors during very small changes in temperature, pressure or liquid level changes.

External Floating Roof (EFR)

An EFR tank consists of an open-topped cylindrical steel shell equipped with a roof that floats on the surface of the stored liquid. The floating roof consists of a deck, fittings, and a rim seal system. Floating decks are constructed of a welded steel plate and are of two general types: platoon or double deck. With all EFR tanks, the roof rises and falls with liquid level in the tank. External floating decks are equipped with a rim seal system, which is attached to the deck perimeter and contacts the tank wall. The purpose of the floating roof and rim seal system is to reduce evaporative loss of the stored liquid. Some annular space remains between the seal system and the tank wall. The seal system slides against the tank wall as the roof is raised and lowered. The floating deck is also equipped with fittings that penetrate the deck and serve operational functions. The EFR design is such that evaporative losses from the stored liquid are limited to losses from the rim seal system and deck fittings (standing storage losses) and any exposed liquid on the tank walls (withdrawal losses).

Internal Floating Roof (IFR)

An IFR tank has both a permanent fixed roof and a floating roof inside. The function of the fixed roof is not to act as a vapor barrier, but to block the wind. The deck in IFR tank rises and falls with the liquid level and either floats directly on the liquid surface (contact deck), or rests on pontoons several inches above the liquid surface (noncontact deck). An IFR roof minimizes evaporative losses of the stored liquid. Both contact and noncontact decks incorporate rim seals and deck fittings for the same purposes as for EFR tanks. Evaporative losses from

floating roofs originate from deck fittings, nonwelded deck seams, and the annular space between the deck and tank wall. In addition, these tanks are freely vented by circulations vents at the top of the fixed roof. The vents minimize the possibility of organic vapors approaching the flammable range.

Closed Vent System (CVS) and Control Device

A fixed roof can be controlled by connecting its vent to a header routed to a control device, such as a flare, thermal oxidizer, or carbon adsorption system.

All identified technologies are technically feasible.

In general, a closed vent system and control device, an IFR, and an EFR are considered top control alternatives for storage vessels in a BACT analysis, though an IFR is often preferred to an EFR for new construction due to its ability to eliminate wind losses. Control requirements are dependent on the storage vessel size and the vapor pressure of the product stored. LOOP is proposing to build eleven (11) new crude oil storage tanks with a Reid vapor pressure of 8 psi. 40 CFR 60 Subpart Kb and LAC 33:III.2103 both stipulate that the combination of tank size and vapor pressure require either an EFR, IFR, or closed vent system with control.

A flare associated with a fixed roof would only have a 98% control efficiency, while EFR and IFR have control efficiencies of at least 99%.

It has been noted that a CVS has been demonstrated for the control of emissions from storage tanks with fixed roofs and that a common control device could be used for all tanks operated. The use of a flare or other means of destruction of VOC emissions for tanks is common in industry. However, for crude oil storage, fixed roof tanks are not common in use and represent a very inefficient way to store product as losses are very high and result in unnecessary secondary emissions. The project proposes the EFR tanks for crude oil storage. As a result, the project is for the construction of floating roof tanks and not for the construction of fixed roof tanks. Without an enclosure such as a fixed roof tank to collect and vent vapors to a control device, the option of a CVS has to add additional roofs, which is not the project specification and is not cost effective based on information provided by the applicant.

Internal Floating Roof versus External Floating Roof Options

If an internal floating roof tank is used for emission control, capital cost, installation and operation of an IFR should be evaluated compared to the proposed EFR tank option. IFR and EFR tanks have many similarities affecting cost of the tank, including the shell, floor, and floating roof, etc. The most notable difference on an IFR tank, as compared to an EFR tank, is the addition of a roof over the tank typically made of plate steel. Assuming the difference in capital cost of the IFR to be only the addition of that plate steel roof, the extra cost would be $255,664 for just the plate (for a 371,000-bbl tank), not including transportation, erection or support columns. As noted previously, each EFR tank is projected to have 4.33 tpy of VOC emissions. An IFR tank would only have emissions of 1.46 tpy, resulting in an emission reduction of 2.87 tpy. Applying a capital recovery factor representing 7% interest over 10 years life expectancy, the resulting cost effectiveness is $12,685 per ton of VOC reduction,

which is not cost effective. Also note that this cost effectiveness does not include any other cost typically associated with a BACT cost analysis which would be incurred. Therefore, an IFR control option is considered economically infeasible.

Based on the analysis presented above and a review of EPA's RACT/BACT/LAER Clearinghouse for similar crude oil storage tanks, it is determined that external floating roofs (EFRs) meeting 40 CFR part 60 Subpart Kb represent BACT for VOC emissions.

BACT analyses for VOC emissions from tank roof landings

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054
29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from landing of floating roofs include:

- Limiting the duration that a floating roof is landed
- Closed vent system and control device

Limiting the Duration

In the case of a floating roof landing (land and refill), limiting the amount of time during the process of filling, emptying, or refilling when the roof is resting on the leg supports will reduce emissions from roof landing events. The affected tanks are subject to the requirement of 40 CFR 60.112b(a)(2)(iii): the process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

Closed Vent System and Control Device.

Installing a system of vapor collection from an external floating roof to capture and transport the vapors while it is positioned on the roof legs is not practical and has not been previously demonstrated. To capture the vapors would require an IFR tank with the previously discussed costs of $255,664 for the plate for the roofing. (Note that this cost is for each 371,000-bbl tank. The corresponding cost for each 600,000-bbl tank is higher.) Combining the cost of the quoted John Zink Flare, the total additional cost for the roofing and flare would be at least $1,534,456,

not including the engineering and installation of a capture system that can route vapors properly both during normal storage operation and tank landings. The annualized cost is $471,667 or higher. Each proposed EFR tank is projected to have landing emissions of 13.8 tpy or less. Applying the 98% control, the reduction would equate to 13.52 tpy from all landing events on a per tank basis. Thus the CVS plus flare option yields a cost effectiveness of at least $34,882 per ton of VOC controlled. Use of a flare would also require a pilot gas and would generate additional criteria pollutants such as NO_X and CO. Due to economic, environmental, energy impacts and cost, an IFR tank control option with CVS and flare is considered to be infeasible for controlling floating roof tank landing emissions.

BACT is determined to complying with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event.

BACT analyses for VOC emissions from tank cleanings

Affected Sources:
22-14, Tank 6413 (Clovelly Dome) EQT048
23-14, Tank 6415 (Clovelly Dome) EQT049
24-14, Tank 6418 (Clovelly Dome) EQT050
25-14, Tank 6419 (Clovelly Dome) EQT051
26-14, Tank 6420 (Clovelly Dome) EQT052
27-14, Tank 6421 (Clovelly Dome) EQT053
28-16, Tank 6422 (Clovelly Dome) EQT054
29-16, Tank 6423 (Clovelly Dome) EQT055
30-16, Tank 6424 (Clovelly Dome) EQT056
31-16, Tank 6425 (Clovelly Dome) EQT057
32-16, Tank 6426 (Clovelly Dome) EQT058

Potentially Applicable Technology

Control strategies that could potentially be employed to control VOC emissions from tank cleanings include:

- Limiting the duration that before removing liquid heels and sludge from the tank bottom after pump out ceases
- Closed vent system and control device

Limiting the Duration

In the case of a tank cleaning, limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor will reduce the amount of vapors that accumulate under the tank roof that add to the emissions that result when the tank is subsequently degassed prior to cleaning.

Closed Vent System and Control Device

LOOP proposes to control emissions from tank cleaning operations (degassing and cleaning activities) with a portable thermal oxidizer with a control efficiency of 98%. LOOP contracts third party suppliers to perform tank cleanings and will contractually require the use of a thermal oxidization device achieving a minimum 98% control efficiency.

BACT is limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and using a thermal oxidation device to control emissions from the tank cleaning operations.

B. ANALYSIS OF AMBIENT AIR QUALITY

Prevention of Significant Deterioration regulations require an analysis of ambient air quality for those pollutants to be emitted in significant amounts from a proposed major modification. VOCs are pollutants of concern in this case.

VOC emissions from the proposed facility will exceed 100 tons per year; therefore, an ambient air quality analysis and preconstruction monitoring are required for ozone. Based on the proposed site's proximity to an existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) and the meteorological factors that indicate this data is representative of existing air quality conditions at the proposed site, a waiver for preconstruction monitoring was granted. This monitoring station is approximately 38 miles north-west of the site location. The prevailing wind from the site is towards this monitor (from the southeast). For post-construction monitoring, LDEQ has approved the use of the Thibodaux, Lafourche Parish, LA ozone monitor.

Qualitative ozone impact analysis, based on the VOC emission increases associated with the project relative to the overall VOC emission in the surrounding areas and the downward trend in ozone levels, was performed and concluded that the Clovelly Dome Storage Terminal expansion project would have no impact on ozone.

C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

As mentioned above, qualitative ozone impact analysis was performed and concluded that the Clovelly Dome Storage Terminal expansion project would have no impact on ozone.

D. PSD INCREMENT ANALYSIS

Qualitative ozone impact analysis was performed. PSD increment modeling was not required.

E. SOURCE RELATED GROWTH IMPACTS

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing will be associated with the project. As a result, there will not be any significant increases in pollutant emissions indirectly associated with LOOP LLC's

proposal. Secondary growth effects will include 15 temporary construction related jobs and 0 permanent jobs.

F. SOILS, VEGETATION, AND VISIBILITY IMPACTS

There will be no significant impact on area soils, vegetation, or visibility.

G. CLASS I AREA IMPACTS

Louisiana's Breton Wildlife Refuge the nearest Class I area, is about 60 kilometers from the site. As such, an ozone impact analysis, including the gathering of ambient air quality data was conducted. An existing LDEQ ozone monitor in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004) was selected. The monitor is approximately 38 miles north-west and the prevailing wind from the site is towards this monitor (from the southeast). These meteorological factors indicate this data is representative of existing air quality conditions at the proposed site. Data from the monitor indicates that the NAAQS ozone level is not exceeded, and the area is currently classified as in attainment. A review of the historical ozone concentration data from the last decade shows a slight downward trend, indicating overall positive movement toward continued compliance with the ozone standard. Additional VOC emission data was collected from multiple parishes surrounding the facility's location. The proposed VOC increase from the facility is approximately only a 3.24% increase. Based upon this analysis, the proposed project will have no significant impact on ozone levels in and around the facility.

H. TOXIC EMISSIONS IMPACT

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

V. CONCLUSION

The Air Permits Division has made a preliminary determination to approve the construction of the tank project at the LOOP Port Complex near Cut Off in Lafourche Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

SPECIFIC CONDITIONS

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

1. Comply with the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.537]

2. The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary", and subject to the following emissions limitations and other specified conditions. Specifications submitted are contained in the applications and additional information for PSD Permit PSD-LA-796 and subsequent modifications.

3. BACT Determination:

ID No.	Description	Activities	VOC BACT
EQT048	22-14, Tank 6413 (Clovelly Dome)	Normal Operation	Equip tanks with External Floating Roofs that meet requirements of 40 CFR 60 Subpart Kb.
EQT049	23-14, Tank 6415 (Clovelly Dome)		
EQT050	24-14, Tank 6418 (Clovelly Dome)		
EQT051	25-14, Tank 6419 (Clovelly Dome)	Tank Landings	Comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event.
EQT052	26-14, Tank 6420 (Clovelly Dome)		
EQT053	27-14, Tank 6421 (Clovelly Dome)		
EQT054	28-16, Tank 6422 (Clovelly Dome)	Tank Cleanings	Limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and use a thermal oxidation device to control emissions from the tank cleaning operations.
EQT055	29-16, Tank 6423 (Clovelly Dome)		
EQT056	30-16, Tank 6424 (Clovelly Dome)		
EQT057	31-16, Tank 6425 (Clovelly Dome)		
EQT058	32-16, Tank 6426 (Clovelly Dome)		

TABLE I: BACT COST SUMMARY

LOOP Port Complex
Agency Interest No. 4634
LOOP LLC
Cut Off, Lafourche Parish, Louisiana
PSD-LA-796 (M-1)

Control Alternatives		Availability/ Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Capital Cost ($)	Annualized Cost ($)	Cost Effectiveness ($/ton)	Notes
Clovelly Dome tanks (EQT0048-EQT0058)									
VOC	Internal Floating Roof design (versus External Floating Roof)	Yes/No	1	99%	2.87	255,664*	36,400	12,685	Rejected
	Closed Vent System for landing operations	Yes/No	1, 2 & 3	98%	13.52	2,387,959	471,667	34,882	Rejected

Notes: a) Negative impacts: 1) economic, 2) environmental, 3) energy, 4) safety

* Cost of plate for a 371,000-bbl tank

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL SERVICES

STATEMENT OF BASIS[1]

PROPOSED PART 70 OPERATING PERMIT 1560-00027-V2

LOOP PORT COMPLEX
LOOP LLC
CUT OFF, LAFOURCHE PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 4634
ACTIVITY NO. PER20160001

I. APPLICANT

The applicant is:	LOOP LLC 137 Northpark Boulevard Covington, Louisiana 70433
Facility:	LOOP Port Complex
SIC Code:	4612
Location:	224 East 101st Place Cut Off, Louisiana 70345

II. PERMITTING AUTHORITY

The permitting authority is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

III. CONTACT INFORMATION

Additional information may be obtained from:

Dr. Qingming Zhang
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313
Phone: (225) 219-3457

[1] 40 CFR 70.7(a)(5) and LAC 33:III.531.A.4 require the permitting authority to "provide a statement that sets forth the legal and factual basis for the proposed permit conditions of any permit issued to a Part 70 source, including references to the applicable statutory or regulatory provisions."

STATEMENT OF BASIS

LOOP PORT COMPLEX
LOOP LLC
CUT OFF, LAFOURCHE PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 4634
ACTIVITY NO. PER20160001
PROPOSED PERMIT NO. 1560-00027-V2

IV. FACILITY BACKGROUND AND CURRENT PERMIT STATUS

LOOP LLC's LOOP Port Complex is an existing pipeline terminal facility in Cut Off and Leeville, Lafourche Parish, Louisiana. The LOOP Port Complex currently operates under Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796, issued July 30, 2015.

V. PROPOSED PERMIT/PROJECT INFORMATION

A permit application dated June 10, 2016 was submitted by LOOP LLC requesting a Part 70 operating permit modification and PSD permit modification for above referenced facility. Additional information dated September 15, 16 and 23, 2016 was also received.

Process Description

The LOOP Port Complex consists of the Clovelly Dome Storage Terminal in Cut Off, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59 of the Gulf of Mexico. The Clovelly Dome Storage Terminal consists of nine (9) underground storage caverns and fifteen (15) operational aboveground storage tanks. The caverns and tanks provide storage for crude oil prior to pipeline delivery. Eight (8) of the caverns have a capacity of approximately 6.7 million barrels of oil each, and one cavern has a capacity of 4 million barrels of oil. The combined aboveground storage tanks have a capacity of 9 million barrels of oil.

The terminal also consists of surface facilities located in the same general vicinity which include a Brine Storage Reservoir, Operations Building, a crude relief tank, fuel and slop oil tanks, emergency electric generators, and ancillary equipment. The Small Boat Harbor, located on Bayou Lafourche, shelters crew and work boats and includes hose testing facilities. The Fourchon Booster Station is a secured unmanned facility with two large diesel storage tanks and a few small storage tanks. Emission control systems utilized at the LOOP Port Complex facilities include the latest storage tank technology, mechanical seals on pumps, and the use of low sulfur fuel oil.

Proposed Modifications

The Clovelly Dome Storage Terminal expansion project was initially proposed in LOOP's December 2014 permit application to add six (6) crude oil storage tanks to the terminal. The project was approved in Part 70 Operating Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796 on July 30, 2015.

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With this permit action, LOOP proposes to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 barrels and four (4) with a capacity of 600,000 barrels each. All eleven (11) new tanks will be equipped with external floating roofs (EFRs). The overall tank capacity at the terminal will be increased from 9 million barrels to approximately 14 million barrels. The oil throughput at the terminal will increase from 182.5 million barrels per year to 250 million barrels per year.

In addition, LOOP proposes to add a 500-kW diesel-fuel fired emergency electric generator and an associated diesel tank (insignificant activity). The tank cleaning emission estimates are changed as follows: 1) two tank cleanings per year rather than one tank cleaning per year, and 2) tank cleaning emissions being controlled by a portable thermal oxidizer. Fugitive emissions from the facility are also reconciled.

VI. ATTAINMENT STATUS OF PARISH

Pollutant	Attainment Status	Designation
$PM_{2.5}$	Attainment	N/A
PM_{10}	Attainment	N/A
SO_2	Attainment	N/A
NO_2	Attainment	N/A
CO	Attainment	N/A
Ozone[2]	Attainment	N/A
Lead	Attainment	N/A

VII. PERMITTED AIR EMISSIONS

Sources of air emissions are listed on the "Inventories" page of the proposed permit. Estimated emissions from the facility, in tons per year (TPY), are as follows:

Pollutant	Before	After	Change
PM_{10}	0.49	0.50	+ 0.01
$PM_{2.5}$	0.49	0.50	+ 0.01
SO_2	0.43	0.43	--
NO_X	10.15	10.94	+ 0.79
CO	2.24	2.41	+ 0.17
VOC	437.54	418.26	- 19.28

[2] VOC and NO_X are regulated as surrogates.

LAC 33:III.Chapter 51-regulated toxic air pollutants (TAP), including all toxic PM_{10} and VOC compounds, are listed below. This list encompasses all Hazardous Air Pollutants (HAP) regulated pursuant to Section 112 of the Clean Air Act. Note, however, not all TAPs are HAPs (e.g., ammonia, hydrogen sulfide).

Pollutant	Before	After	Change
2,2,4-Trimethylpentane	0.22	0.22	--
Benzene	2.60	2.48	- 0.12
Cumene	0.04	0.04	--
Ethyl benzene	0.26	0.26	--
n-Hexane	2.73	2.60	- 0.13
Toluene	1.39	1.36	- 0.03
Xylenes	0.76	0.78	+ 0.02
Total	**8.00**	**7.74**	**- 0.26**

The facility is a major source of criteria pollutants, a minor source of HAPs, and a minor source of TAPs.

Estimated emissions for individual emission units and groups of emission units are set forth in the tables of the proposed permits entitled "Emission Rates for Criteria Pollutants" and "Emission Rates for TAP/HAP & Other Pollutants." These tables are part of the proposed permit.

Emission calculations can be found in Appendix A of the permit application. The calculations address the manufacturer's specifications, fuel composition (e.g., sulfur content), emission factors, and other assumptions on which the emission estimations are based and have been reviewed by the permit writer for accuracy.

General Condition XVII Activities

Very small emissions to the air resulting from routine operations that are predictable, expected, periodic, and quantifiable and that are submitted by the applicant and approved by the Air Permits Division are considered authorized discharges. These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. However, such emissions are considered when determining the facility's potential to emit for evaluation of applicable requirements. Approved General Condition XVII activities are noted in Section VIII of the proposed permit.

Insignificant Activities

The emissions units or activities listed in Section IX of the proposed permit have been classified as insignificant pursuant to LAC 33:III.501.B.5. By such listing, the LDEQ exempts these sources or types of sources from the requirement to obtain a permit under LAC 33:III.Chapter 5. However, such emissions are considered when determining the

facility's potential to emit for evaluation of applicable requirements. Insignificant activities are noted in Section IX of the proposed permit.

VIII. REGULATORY APPLICABILITY

Regulatory applicability is discussed in three sections of the proposed permit: Section X (Table 1), Section XI (Table 2), and Specific Requirements. Each is discussed in more detail below.

Section X (Table 1): Applicable Louisiana and Federal Air Quality Requirements

Section X (Table 1) summarizes all applicable federal and state regulations. In the matrix, a "1" represents a regulation applies to the emissions unit. A "1" is also used if the emissions unit is exempt from the emissions standards or control requirements of the regulation, but monitoring, recordkeeping, and/or reporting requirements apply.

A "2" is used to note that the regulation has requirements that would apply to the emissions unit, but the unit is exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified, or reconstructed since the regulation has been effective. If the specific criterion changes the emissions unit will have to comply with the regulation at a future date. Each "2" entry is explained in Section XI (Table 2).

A "3" signifies that the regulation applies to this general type of source (e.g., furnace, distillation column, boiler, fugitive emissions, etc.), but does not apply to the particular emissions unit. Each "3" entry is explained in Section XI (Table 2).

If blank, the regulation clearly does not apply to this type of emissions unit.

Section XI (Table 2): Explanation for Exemption Status or Non-Applicability of a Source

Section XI (Table 2) of the proposed permit provides explanation for either the exemption status or non-applicability of given federal or state regulation cited by 2 or 3 in the matrix presented in Section X (Table 1).

Specific Requirements

Applicable regulations, as well as any additional monitoring, recordkeeping, and reporting requirements necessary to demonstrate compliance with both the federal and state terms and conditions of the proposed permit, are provided in the "Specific Requirements" section. Any operating limitations (e.g., on hours of operation or throughput) are also set forth in this section. Associated with each Specific Requirement is a citation of the federal or state regulation upon which the authority to include that Specific Requirement is based.

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1. Federal Regulations

40 CFR 60 – New Source Performance Standards (NSPS)

The following subparts are applicable at the Port Complex: A, Ka, Kb, and IIII. Applicable emission standards, monitoring, test methods and procedures, recordkeeping, and reporting requirements are summarized in the "Specific Requirements" section of the proposed permit.

40 CFR 61 – National Emission Standards for Hazardous Air Pollutants (NESHAP)

No NESHAP provisions are applicable to the facility.

40 CFR 63 – Maximum Achievable Control Technology (MACT)

The following subparts are applicable at the Port Complex: A, ZZZZ, and CCCCCC. Applicable emission standards, monitoring, test methods and procedures, recordkeeping, and reporting requirements are summarized in the "Specific Requirements" section of the proposed permit.

Clean Air Act §112(g) or §112(j) – Case-By-Case MACT Determinations

A case-by-case MACT determination pursuant to §112(g) or §112(j) of the Clean Air Act was not required.

40 CFR 64 – Compliance Assurance Monitoring (CAM)

Per 40 CFR 64.2(a), CAM applies to each pollutant-specific emissions unit (PSEU) that 1) is subject to an emission limitation or standard, 2) uses a control devices to achieve compliance, and 3) has potential pre-control device emissions that are equal to or greater than 100 percent of the amount, in TPY, required for a source to be classified as a major source.

There are no emissions units in this facility that are subject to CAM.

Acid Rain Program

The Acid Rain Program, 40 CFR Part 72 – 78, applies to the fossil fuel-fired combustion devices listed in Tables 1-3 of 40 CFR 73.10 and other utility units, unless a unit is determined not to be an affected unit pursuant to 40 CFR 72.6(b). LDEQ has incorporated the Acid Rain Program by reference at LAC 33:III.505. The facilityis not subject to the Acid Rain Program.

2. SIP-Approved State Regulations

Applicable state regulations are also noted in Section X (Table 1) of the proposed permit. Some state regulations have been approved by the U.S. Environmental Protection Agency (EPA) as part of Louisiana's State Implementation Plan (SIP). These regulations are referred to as "SIP-approved" and are enforceable by both LDEQ and EPA. All LAC 33:III.501.C.6 citations are federally enforceable unless otherwise noted.

3. State-Only Regulations

Individual chapters or sections of LAC 33:III noted by an asterisk in Section X (Table 1) are designated "state-only" pursuant to 40 CFR 70.6(b)(2). Terms and conditions of the proposed permit citing these chapters or sections are not SIP-approved and are not subject to the requirements of 40 CFR Part 70. These terms and conditions are enforceable by LDEQ, but not EPA. All conditions not designated as "state-only" are presumed to be federally enforceable.

IX. NEW SOURCE REVIEW (NSR)

1. Prevention of Significant Deterioration (PSD)

The facility's source category is listed in Table A of the definition of "major stationary source" in LAC 33:III.509. As such, the PSD major source threshold is 100 TPY (of any regulated NSR pollutant).

LOOP Port Complex is a major stationary source under the PSD program, LAC 33:III.509. Potential emissions from the entire LOOP Port Complex (including emissions from GC XVII and insignificant activities), in tons per year, are:

PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	VOC	CO_2e
0.56	0.56	0.44	11.73	3.08	418.26	1,469

Except for VOC, potential emissions from the entire complex for any other PSD regulated pollutant are below PSD significance level. Therefore, it is not required to conduct PSD analyses for any PSD pollutant other than VOC.

VOC emission increase due to the Clovelly Dome Storage Terminal expansion project is over the PSD significance level (40 TPY) and there are no contemporaneous emission changes from the facility. Therefore, as determined previously in the initial PSD Permit PSD-LA-796, the Clovelly Dome Storage Terminal expansion project is subject to PSD review for VOC emissions.

A list of affected emissions units, baseline actual emissions, and projected actual emissions or potential to emit for each emissions unit, as well as a summary of

contemporaneous changes associated with the proposed project, can be found in Section 2 of the permit application. This data has been reviewed by the permit writer.

BACT

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major stationary source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes. Additionally, BACT shall not result in emissions of any pollutant which would exceed any applicable standard under 40 CFR Parts 60 and 61.

BACT for all affected crude oil storage tanks (EQT048 through EQT058) is determined to be external floating roof meeting the requirements of 40 CFR 60 Subpart Kb. BACT for storage tank landings is to comply with requirements of 40 CFR 60.112b(a)(2)(iii) during each roof landing event. BACT for storage tank cleaning is to limit the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning and to use a thermal oxidation device to control emissions from the tank cleaning operations.

A more thorough discussion of the BACT selection process can be found in PSD-LA-796 (M-1). BACT and any other associated monitoring, recordkeeping, and reporting requirements necessary to determine compliance with the PSD permit are cited as "LAC 33:III.509" in the proposed Title V permit.

Air Quality Impact Analyses

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a proposed modified major stationary source. VOC is pollutant of concern in this case.

Qualitative ozone impact analysis, based on the VOC emission increases associated with the project relative to the overall VOC emission in the surrounding areas and the downward trend in ozone levels, was performed and concluded that the Clovelly Dome Storage Terminal expansion project would have no impact on ozone.

2. Nonattainment New Source Review (NNSR)

The facility is located in an attainment area; therefore, NNSR does not apply.

3. Notification of Federal Land Manager

The Federal Land Manager (FLM) is responsible for evaluating a facility's projected impact on the Air Quality Related Values (AQRV) (e.g., visibility, sulfur and nitrogen deposition, any special considerations concerning sensitive resources, etc.[3]) and recommending that LDEQ either approve or disapprove the facility's permit application based on anticipated impacts. The FLM also may suggest changes or conditions on a permit. However, LDEQ makes the final decision on permit issuance. The FLM also advises reviewing agencies and permit applicants about other FLM concerns, identifies AQRV and assessment parameters for permit applicants, and makes ambient monitoring recommendations.

If LDEQ receives a PSD or NNSR permit application for a facility that "may affect" a Class I area, the FLM charged with direct responsibility for managing these lands is notified.

The meaning of the term "may affect" is interpreted by EPA policy to include all major sources or major modifications which propose to locate within 100 kilometers (km) of a Class I area. However, if a major source proposing to locate at a distance greater than 100 km is of such size that LDEQ or the FLM is concerned about potential impacts on a Class I area, LDEQ can ask the applicant to perform an analysis of the source's potential emissions impacts on the Class I area. This is because certain meteorological conditions, or the quantity or type of air emissions from large sources located further than 100 km, may cause adverse impacts. In order to determine whether a source located further than 100 km may affect a Class I area, LDEQ uses the Q/d approach.

Q/d refers to the ratio of the sum of the net emissions increase (in tons per year) of PM_{10}, SO_2, NO_X, and H_2SO_4 to the distance (in kilometers) of the facility from the nearest boundary of the Class I area.

$$Q/d = \frac{PM_{10\,(NEI)} + SO_{2\,(NEI)} + NO_{X\,(NEI)} + H_2SO_{4\,(NEI)}}{\text{Class I km}}$$ [4]

Where:

$PM_{10\,(NEI)}$	=	net emissions increase of PM_{10}
$SO_{2\,(NEI)}$	=	net emissions increase of SO_2
$NO_{X\,(NEI)}$	=	net emissions increase of NO_X
$H_2SO_{4\,(NEI)}$	=	net emissions increase of H_2SO_4
Class I km	=	distance to nearest Class I area (in kilometers)

[3] See http://www2.nature.nps.gov/air/Permits/ARIS/AQRV.cfm.

[4] If both NNSR and PSD review are required, the higher of the two "net emissions increase" values has been selected. The net emissions increase for NNSR and PSD purposes may be different due to differing contemporaneous periods. If the net emissions increase of any pollutant is negative, the value used in the equation has been set to zero. If the project did not trigger a netting analysis, LDEQ uses the project increase (see §504.A.3 (NNSR) and §509.A.4 (PSD)). In this case, the value will be less than the pollutant's significance level.

If Q/d $\geq$ 4, LDEQ will formally notify the FLM in accordance with LAC 33:III.504.E.1 / LAC 33:III.509.P.1.

Since the project does not trigger PSD review for PM_{10}, SO_2, NO_X, or H_2SO_4, (Q/d = 0), FLM will not be notified.

4. Reasonable Possibility

As previously mentioned, emission increases of VOC associated with the proposed project trigger PSD review. Since the "potential to emit" for any other PSD regulated pollutant from the entire facility is below PSD significance level, there is no "reasonable possibility" that the proposed project may result in a significant emission increases for these pollutants.

X. ADDITIONAL MONITORING AND TESTING REQUIREMENTS

In addition to the monitoring and testing requirements set forth by applicable state and federal regulations (see Section VIII of this Statement of Basis), a number of "LAC 33:III.507.H.1.a" and/or "LAC 33:III.501.C.6" conditions may appear in the "Specific Requirements" section of the proposed permit. These conditions have been added where no applicable regulation exists or where an applicable regulation does not contain sufficient monitoring, recordkeeping, and/or reporting provisions to ensure compliance. LAC 33:III.507.H.1.a provisions, which may include recordkeeping requirements, are intended to fulfill Part 70 periodic monitoring obligations under 40 CFR 70.6(a)(3)(i)(B).

ID	Description	Pollutant	Method	Frequency
None				

XI. OPERATIONAL FLEXIBILITY

Emissions Caps

An emissions cap is a permitting mechanism to limit allowable emissions of two or more emissions units below their collective potential to emit (PTE). The proposed permit does not establish any new emissions cap. The emission cap (GRP003) established previously has been updated to include the crude oil storage tanks proposed with this permit action.

Alternative Operating Scenarios

LAC 33:III.507.G.5 allows the owner or operator to operate under any operating scenario incorporated in the permit. Any reasonably anticipated alternative operating scenarios may be identified by the owner or operator through a permit application and included in the permit. The proposed permit does not include an alternative operating scenario.

Streamlined Requirements

When applicable requirements overlap or conflict, the permitting authority may choose to include in the permit the requirement that is determined to be most stringent or protective as detailed in EPA's "White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program" (March 5, 1996). The overall objective is to determine the set of permit terms and conditions that will assure compliance with all applicable requirements for an emissions unit or group of emissions units so as to eliminate redundant or conflicting requirements. The proposed permit does not contain streamlined provisions.

XII. PERMIT SHIELD

A permit shield, as described in 40 CFR 70.6(f) and LAC 33:III.507.I, provides an "enforcement shield" which protects the facility from enforcement action for violations of applicable federal requirements. It is intended to protect the facility from liability for violations if the permit does not accurately reflect an applicable federal or federally enforceable requirement. The proposed permit does not establish a permit shield.

XIII. IMPACTS ON AMBIENT AIR

Emissions associated with the proposed modification were reviewed by the Air Permits Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

XIV. COMPLIANCE HISTORY AND CONSENT DECREES

The facility's compliance history can be found in Section 5 of the permit application. It must be disclosed per LAC 33:III.517.E and 517.D.12, if applicable.

No federal or state actions have been issued since the existing permit for the facility was issued.

XV. REQUIREMENTS THAT HAVE BEEN SATISFIED

The following state and/or federal obligations have been satisfied and are therefore not included as Specific Requirements.

Source ID	Citation	Description
None		

XVI. OTHER REQUIREMENTS

Executive Order No. BJ 2008-7 directs all state agencies to administer their regulatory practices, programs, contracts, grants, and all other functions vested in them in a manner consistent with Louisiana's Comprehensive Master Plan for a Sustainable Coast and public interest to the maximum extent possible. If a proposed facility or modification is located in the Coastal Zone, LDEQ requires the applicant to document whether or not a Coastal Use Permit is required, and if so, whether it has been obtained. Coastal Use Permits are issued by the Coastal Management Division of the Louisiana Department of Natural Resources (LDNR).

The facility is located in the Coastal Zone; however, a Coastal Use Permit is not required.

XVII. PUBLIC NOTICE/PUBLIC PARTICIPATION

Written comments, written requests for a public hearing, or written requests for notification of the final decision regarding this permit action may be submitted to:

LDEQ, Public Participation Group
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

Written comments and/or written requests must be received prior to the deadline specified in the public notice. If LDEQ finds a significant degree of public interest, a public hearing will be held. All comments will be considered prior to a final permit decision.

LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The permit application, proposed permit, and this Statement of Basis are available for review at LDEQ, Public Records Center, Room 127, 602 North 5th Street, Baton Rouge, Louisiana. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). Additional copies may be viewed at the local library identified in the public notice. The available information can also be accessed electronically via LDEQ's Electronic Document Management System (EDMS) on LDEQ's public website, www.deq.louisiana.gov.

Inquiries or requests for additional information regarding this permit action should be directed to the contact identified on page 1 of this Statement of Basis.

Persons wishing to be included on the public notice mailing list or for other public participation-related questions should contact LDEQ's Public Participation Group at P.O. Box 4313, Baton Rouge, LA 70821-4313; by e-mail at maillistrequest@ldeq.org; or

contact LDEQ's Customer Service Center at (225) 219-LDEQ (219-5337). Alternatively, individuals may elect to receive public notices via e-mail by subscribing to LDEQ's Public Notification List Service at http://www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm.

Permit public notices can be viewed at LDEQ's "Public Notices" webpage, http://www.deq.louisiana.gov/apps/pubNotice/default.asp. Electronic access to each proposed permit and Statement of Basis current on notice is also available on this page. General information related to public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

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APPENDIX A - ACRONYMS

AAS	Ambient Air Standard (LAC 33:III.Chapter 51)
AP-42	EPA document number of the Compilation of Air Pollutant Emission Factors
BACT	Best Available Control Technology
BTU	British Thermal Units
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAM	Compliance Assurance Monitoring, 40 CFR 64
CEMS	Continuous Emission Monitoring System
CMS	Continuous Monitoring System
CO	Carbon monoxide
COMS	Continuous Opacity Monitoring System
CFR	Code of Federal Regulations
EI	Emissions Inventory (LAC 33:III.919)
EPA	(United States) Environmental Protection Agency
EIQ	Emission Inventory Questionnaire
ERC	Emission Reduction Credit
FR	Federal Register or Fixed Roof
H_2S	Hydrogen sulfide
H_2SO_4	Sulfuric acid
HAP	Hazardous Air Pollutants
Hg	Mercury
HON	Hazardous Organic NESHAP
IBR	Incorporation by Reference
LAER	Lowest Achievable Emission Rate
LDEQ	Louisiana Department of Environmental Quality
M	Thousand
MM	Million
MACT	Maximum Achievable Control Technology
MEK	Methyl ethyl ketone
MIK	Methyl isobutyl ketone
MSDS	Material Safety Data Sheet
MTBE	Methyl tert-butyl ether
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industrial Classification System (replacement to SICC)
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMOC	Non-Methane Organic Compounds

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APPENDIX A - ACRONYMS

NO_X	Nitrogen Oxides
NNSR	Nonattainment New Source Review
NSPS	New Source Performance Standards
NSR	New Source Review
OEA	LDEQ Office of Environmental Assessment
OEC	LDEQ Office of Environmental Compliance
OES	LDEQ Office of Environmental Services
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in nominal diameter
$PM_{2.5}$	Particulate Matter less than 2.5 microns in nominal diameter
ppm	parts per million
ppmv	parts per million by volume
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
RBLC	RACT-BACT-LAER Clearinghouse
RMP	Risk Management Plan (40 CFR 68)
SICC	Standard Industrial Classification Code
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SOCMI	Synthetic Organic Chemical Manufacturing Industry
TAP	Toxic Air Pollutants (LAC 33:III.Chapter 51)
TOC	Total Organic Compounds
TPY	Tons Per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
$\mu g/m^3$	Micrograms per Cubic Meter
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound
VOL	Volatile Organic Liquid
VRU	Vapor Recovery Unit

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APPENDIX B – GLOSSARY

Best Available Control Technologies (BACT) – an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this Part (Part III) which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

CAM - Compliance Assurance Monitoring – A federal air regulation under 40 CFR Part 64.

Carbon Monoxide (CO) – (Carbon monoxide) a colorless, odorless gas produced by incomplete combustion of any carbonaceous (gasoline, natural gas, coal, oil, etc.) material.

Cooling Tower – A cooling system used in industry to cool hot water (by partial evaporation) before reusing it as a coolant.

Continuous Emission Monitoring System (CEMS) – The total combined equipment and systems required to continuously determine air contaminants and diluent gas concentrations and/or mass emission rate of a source effluent.

Cyclone – A control device that uses centrifugal force to separate particulate matter from the carrier gas stream.

Federally Enforceable Specific Condition – A federally enforceable specific condition written to limit the potential to Emit (PTE) of a source that is permanent, quantifiable, and practically enforceable. In order to meet these requirements, the draft permit containing the federally enforceable specific condition must be placed on public notice and include the following conditions:

- A clear statement of the operational limitation or condition which limits the source's potential to emit;
- Recordkeeping requirements related to the operational limitation or condition;
- A requirement that these records be made available for inspection by LDEQ personnel;
- A requirement to report for the previous calendar year.

Grandfathered Status – those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

APPENDIX B – GLOSSARY

Lowest Achievable Emission Rate (LAER) – for any source, the more stringent rate of emissions based on the following:

a. the most stringent emissions limitation that is contained in the implementation plan of any state for such class or category of major stationary source, unless the owner or operator of the proposed stationary source demonstrates that such limitations are not achievable; or
b. the most stringent emissions limitation that is achieved in practice by such class or category of stationary source. This limitation, when applied to a modification, means the lowest achievable emissions rate for the new or modified emissions units within the stationary source. In no event shall the application of this term permit a proposed new or modified major stationary source to emit any pollutant in excess of the amount allowable under an applicable new source standard of performance.

NESHAP – National Emission Standards for Hazardous Air Pollutants – Air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

Maximum Achievable Control Technology (MACT) – the maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

NSPS – New Source Performance Standards – Air emission standards for specific types of facilities, as outlined in 40 CFR Part 60.

New Source Review (NSR) – a preconstruction review and permitting program applicable to new or modified major stationary sources of criteria air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nonattainment New Source Review (NNSR) – a New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) set forth at 40 CFR Part 50. NNSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

Organic Compound – any compound of carbon and another element. Examples: methane (CH_4), ethane (C_2H_6), carbon disulfide (CS_2).

Part 70 Operating Permit – also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507.

STATEMENT OF BASIS

LOOP PORT COMPLEX
LOOP LLC
CUT OFF, LAFOURCHE PARISH, LOUISIANA
AGENCY INTEREST (AI) NO. 4634
ACTIVITY NO. PER20160001
PROPOSED PERMIT NO. 1560-00027-V2

APPENDIX B – GLOSSARY

PM_{10} – particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – a New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Selective Catalytic Reduction (SCR) – A non-combustion control technology that destroys NO_X by injecting a reducing agent (e.g., ammonia) into the flue gas that, in the presence of a catalyst (e.g., vanadium, titanium, or zeolite), converts NO_X into molecular nitrogen and water.

Sulfur Dioxide (SO_2) – An oxide of sulphur.

TAP – LDEQ acronym for toxic air pollutants regulated under LAC 33 Part III, Chapter 51, Tables 1 through 3.

"Top Down" Approach – An approach which requires use of the most stringent control technology found to be technically feasible and appropriate based on environmental, energy, economic, and cost impacts.

Title V permit – see Part 70 Operating Permit.

Volatile Organic Compound (VOC) – any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the Administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.

Qingming Zhang

From: Kerry D. Brouillette <kerry.brouillette@c-ka.com>
Sent: Thursday, September 15, 2016 2:14 PM
To: Qingming Zhang
Subject: LOOP Permit items
Attachments: LOOP Flex Paragraph.docx

Qingming,

Please see attached for paragraph explaining the number of landing LOOP has permitted as it pertains to business needs. Flexibility to meet customer demand for storage and movements is primary for LOOP.

Please let me know if you have any questions.

Kerry Brouillette
Air Quality Program Manager
CK ASSOCIATES
17170 Perkins Road
Baton Rouge, LA 70810
225-755-1000 Office
225-923-6437 Direct
225-223-0972 Cell
www.c-ka.com

The Louisiana Offshore Oil Port (LOOP) storage facilities in Clovelly, Louisiana continuously receive and distribute crude oil. LOOP facilitates movement of various crude oils from different parts of the world, as well as specific crudes from oil fields in the Gulf of Mexico and the continental United States.

The primary business of the Clovelly Tank Facility is to provide a means for customers to distribute products from producers to customers quickly. The above ground tanks operated at the facility are strategic to segregate specialty grades of crude oil for LOOP's customers. Customers with unique requirements can isolate their supplies and protect the quality specifications of the crude oil sent to refineries.

The tanks have floating roofs and efficient bottoms, allowing them to be emptied and handle varying grades of crude oil. The nature of LOOP's business requires that the facility's aboveground tanks are able to be emptied and filled frequently to meet customer demand for movements of differing grades of crude.

The ability to drain the tanks of one type of crude in order to re-fill with a differing type of crude is a critical process step required to maintain the quality of the crude variety without contamination. Maintaining quality reflects directly to the end user (refiner's) ability to maintain a ratable and efficient refining operation (typical crude oil quality characteristics to protect include sulfur content, water content and specific gravity).

The current Title V permit allows 90 landings and the current Title V application is not proposing to change this number. This number of landings gives LOOP the flexibility to accommodate their customers' needs for crude oils with varying compositions.

Qingming Zhang

From: Kerry D. Brouillette <kerry.brouillette@c-ka.com>
Sent: Thursday, September 15, 2016 2:28 PM
To: Qingming Zhang
Subject: LOOP Clovelly Storage GHG Emissions Summary
Attachments: LOOP Clovelly GHG Emissions Summary.pdf

Qingming,

Please see attached for GHG emissions from fuel burning equipment at the Clovelly Dome site (AI 4634).

Please let me know if you have any questions.

Kerry Brouillette
Air Quality Program Manager
CK ASSOCIATES
17170 Perkins Road
Baton Rouge, LA 70810
225-755-1000 Office
225-923-6437 Direct
225-223-0972 Cell
www.c-ka.com

Potential to Emit

LOOP LLC Port Complex
Lafourche Parish, Louisiana

Engine Data

TEMPO ID	EPN	Description	Fuel Type	Brake Hp	Annual Operating Hours	Specific Fuel Consumption (Btu/hp-hr)[a,d]	Heat Input (MMBtu/hr)[b]	Annual Heat Rate (MMBtu/yr)[c]
EQT0009	15-78	Fourchon Booster Station - Standby Generator	Diesel	805	100	7,000	5.64	564
EQT0011	17-78	Operations Center Standby Generator	Diesel	671	100	7,000	4.70	470
EQT0012	18-78	Emergency Crude Transfer Pump (Clovelly Dome)	Diesel	860	100	7,000	6.02	602
EQT0014	20-78	Clovelly Fire Pump	Diesel	274	100	7,000	1.92	192
EQT0015	21-78	Standby Generator - Brine Storage Reservoir (Clovelly Dome)	Diesel	108	100	7,000	0.76	76
EQT0018	35-88	Fire School Pump (Clovelly Dome)	Diesel	400	100	7,000	2.80	280
EQT0019	38-91	Operations Center - Fire Pump (Clovelly Dome)	Diesel	500	100	7,000	3.50	350
EQT0020	5-99	Crude Oil Tankfarm Firewater Pump (Clovelly Dome)	Diesel	1,100	100	7,000	7.70	770
EQT0021	1-07	470 bhp Emergency Generator (Small Boat Harbor)	Diesel	470	100	7,000	3.29	329
EQT0022	2-07	470 bhp Emergency Generator (Tank Facility)	Diesel	470	100	7,000	3.29	329
EQT0023	3-07	671 bhp Emergency Generator (Clovelly Dome)	Diesel	671	100	7,000	4.70	470
EQT0024	4-07	671 bhp Emergency Generator (Clovelly Control Room)	Diesel	671	100	7,000	4.70	470
EQT0025	5-07	268 bhp Emergency Generator (OC Warehouse)	Diesel	268	100	7,000	1.88	188
EQT0026	6-07	168 bhp Emergency Generator (LOCAP)	Diesel	168	100	7,000	1.18	118
EQT0047	1-10	520 hp Emergency Generator	Diesel	520	100	6,496	3.38	338
TBD	1-16	Standby Generator (Clovelly Dome)	Diesel	671	100	7,000	4.70	470

[a] Given that specific data is unavailable for these engines (except for EPN 1-10), this calculation uses the average brake-specific fuel consumption from AP-42 Table 3.3-1, Footnote a

[b] calculated; (Btu/hp-hr * hp) / 1,000,000 (except for EPN 20-78 for which the Hp is back-calculated

[c] calculated; MMBtu/hr * hr/yr

[d] For EPN 1-10, the Specific Fuel Consumption is calculated as follows: 24.3 gal/hr / 520 Hp * 139,000 Btu/gal. The fuel consumption (gal/hr) is per LOOP and the Btu/gal for diesel was taken from http://www.engineeringtoolbox.com/energy-content-d_868.htm

Greenhouse Gas Emission Factors

Pollutant	Global Warming Potential[a]	Emission Factor[b] (kg/MMBtu)
CO_2	1	73.96
CH_4	25	3.0E-03
N_2O	298	6.0E-04
CO_2e	-	

[a] Default global warming potentials from 40 CFR 98 Subpart A, Table A-1.

[b] Default emission factors from 40 CFR 98 Subpart C, Tables C-1 and C-2, for diesel.

Greenhouse Gas Emissions Summary

TEMPO ID	EPN	CO2			CH4			N2O			CO2e		
		(metric tpy)[f]	(short tpy)[g]	(lb/hr)	(metric tpy)[f]	(short tpy)[g]	(lb/hr)	(metric tpy)[f]	(short tpy)[g]	(lb/hr)	(metric tpy)[f]	(short tpy)[g]	(lb/hr)
EQT0009	15-78	42	46	939	0.03	0.05	1	0.1	0.1	2	42	46	922
EQT0011	17-78	35	38	766	0.04	0.04	1	0.1	0.1	2	35	38	768
EQT0012	18-78	45	49	982	0.05	0.05	1	0.1	0.1	2	45	49	985
EQT0014	20-78	14	16	313	0.01	0.02	0.3	0.03	0.04	1	14	16	314
EQT0015	21-78	6	6	123	0.01	0.01	0.1	0.01	0.01	0.3	6	6	124
EQT0018	35-88	21	23	457	0.02	0.02	0.5	0.1	0.1	1	21	23	458
EQT0019	38-91	26	29	571	0.03	0.03	1	0.1	0.1	1	26	29	573
EQT0020	5-99	57	63	1256	0.06	0.06	1	0.1	0.2	3	57	63	1260
EQT0021	1-07	24	27	536	0.02	0.03	1	0.1	0.1	1	24	27	538
EQT0022	2-07	24	27	536	0.02	0.03	1	0.1	0.1	1	24	27	538
EQT0023	3-07	35	38	766	0.04	0.04	1	0.1	0.1	2	35	38	768
EQT0024	4-07	35	38	766	0.04	0.04	1	0.1	0.1	2	35	38	768
EQT0025	5-07	14	15	306	0.01	0.02	0.3	0.03	0.04	1	14	15	307
EQT0026	6-07	9	10	192	0.01	0.01	0.2	0.02	0.02	0.5	9	10	192
EQT0047	1-10	25	28	551	0.03	0.03	1	0.1	0.1	1	25	28	553
TBD	1-16	35	38	766	0.04	0.04	1	0.1	0.1	2	35	38	768

[f] Calculated by using 40 CFR 98 Subpart C Equation C-1b.

[g] Calculated by multiplying metric tons per year by 1.10231 short tons/metric ton, as per 40 CFR 98 Subpart A, Table A-2

Qingming Zhang

From: Kerry D. Brouillette <kerry.brouillette@c-ka.com>
Sent: Friday, September 16, 2016 4:18 PM
To: Qingming Zhang
Subject: LOOP EPA Comment Responses on BACT
Attachments: LOOP EPA BACT Responses per Comments.docx

Qingming,

This should be the last of the information needed for draft permit issuance. Please let me know if you come across other items which we can help address as you complete the draft permit.

Thank you.

Kerry Brouillette
Air Quality Program Manager
CK ASSOCIATES
17170 Perkins Road
Baton Rouge, LA 70810
225-755-1000 Office
225-923-6437 Direct
225-223-0972 Cell
www.c-ka.com

Comment: Evaluate CVS as control for the proposed crude oil storage tanks

The VOC BACT evaluation for Floating Roof Tank Landings from the December 2014 application was presented as shown below.

> ***Step 4 – Evaluate Most Effective Controls***
>
> *If a closed vent system and control device is used for emissions control, capital cost, installation, and operation of a flare would be evaluated with the emissions reduced from the proposed EFR tank option. Although the application of a CVS and control device has not been demonstrated for an EFR, we can assume that technically it can be done for the purposes of a cost effectiveness analysis. Based on a quote from the John Zinc Company, an installed combustor having a 98% destruction efficiency has an annualized cost of $471,667. Landing emissions are similar between the existing larger tanks and proposed smaller diameter tanks. The proposed tanks are projected to have one (1) additional landing annually than the existing tanks and therefore, these tanks represent the worst-case condition. Each proposed EFR tank in this project is projected to have landing emissions of 16.10 tpy (5 landings at 6,439 pounds per landing). Applying the 98% control efficiency, the reduction in emissions would equate to 15.78 tpy, thus the CVS plus control device option yields a cost effectiveness of $29,890 per ton controlled. Note that this cost does not take into consideration the engineering and installation of a capture system to route the vapors during a landing event to the control device. Due to the economics, environmental, and energy impacts, and the consideration that the technology has not been demonstrated on an EFR tank, the CVS and control device is considered to be an infeasible control option. Therefore, it is eliminated from further consideration for VOC emission control of the proposed tanks.*
>
> *Limiting the amount of time that the floating roof is landed and complying with 40 CFR 60.112b(a)(2)(iii) is an effective way to minimize the emissions during a roof landing event.*

It has been noted that a CVS has been demonstrated for the control of emissions from storage tanks and that a common control device could be used for all tanks operated. The use of a flare or other means of destruction of VOC emissions for tanks is common in industry. However, for crude oil storage, fixed roof tanks are not common in use and represent a very inefficient way to store product as losses are very high and result in unnecessary secondary emissions. The project proposes the EFR tanks for crude oil

storage and a BACT analysis revealed that it was not cost effective to use IFR tanks. As a result, the project is for the construction of floating roof tanks and not for the construction of fixed roof tanks. Without an enclosure such as a fixed roof tank which can collect and vent vapors to a control device, then the option of a CVS becomes technically infeasible as to enclose an EFR effectively makes the tank a fixed roof tank which is not the project specification. LOOP has years of experience in the practice of operating and maintaining floating roof tanks and does not wish to have multiple scenario tank operating requirements to have to incorporate into standard and emergency planning.

Comment: Evaluate Cost of VOC Control Due to Landings

The changes presented in the June 2016 application include the addition of four 600K BBL storage tanks as well as one 371K BBL storage tank. However, the proposed number of tank roof landings is not being changed. Therefore, the average number of landings and associated emissions per tank is reduced. This results in an increase in cost per ton controlled for each tank as noted in Table 1 below. The result is that control of landing loss emissions remains not cost effective and the initial BACT determination of no additional remains.

Table 1 – Cost Effectiveness Analysis

Tank Size (BBL)	Number of Tanks	Roof Landings Per Tank	Total Roof Landings	VOC Emissions Per Landing (lb)	Uncontrolled Annual VOC Emissions Per Tank (TON)	Control Efficiency (%)	VOC Reduction (TON)	Combustor Cost	Cost Per Ton
December 2014 Application									
600K	15	4	60	6,550	13.1	98	12.84	$471,667	$36,740
371K	6	5	30	6,439	16.10	98	15.78	$471,667	$29,899
June 2016 Application									
600K	19	3.2	60	6,550	10.34	98	10.14	$471,667	$46,537
371K	7	4.3	30	6,439	13.8	98	13.52	$471,667	$34,882

Qingming Zhang

From: Jennifer F. Brouillette <jennifer.brouillette@c-ka.com>
Sent: Friday, September 23, 2016 3:14 PM
To: Qingming Zhang
Cc: Kerry D. Brouillette
Subject: AI# 4634
Attachments: LOOP Fug Calc 092316.pdf; Section 12.pdf

Activity No. PER20160001
AI No. 4634
LOOP Port Complex

Qingming,

As we discussed, please find attached a reconciled emissions estimate for the fugitives emissions source as well as a revised EIQ sheet and an updated Section 12 from the application form.

Please let me know if you have any questions.

Thank you,

Jennifer F. Brouillette
Environmental Scientist

CK ASSOCIATES
Environmental Consultants

17170 Perkins Road
Baton Rouge, LA 70810
Office: 225-755-1000
Direct Line:225-923-6449
Mobile: Web: www.c-ka.com

Potential to Emit

LOOP LLC Port Complex
Lafourche Parish, Louisiana

Source ID: **FUG001**
10-78 Fugitive Emissions

Given:

Component Type	Service	Component Count
valves	Heavy liquid (HL)	195
pump seals	Heavy liquid (HL)	156
flanges	Heavy liquid (HL)	1,209

Note: Component counts were increased by 30% to account for additional tanks.

Calculation Methodology:
VOC Average Hourly Rate [lb/hr] = API Emission Factor [kg/component-hr] x Component Count * Conversion Factor [2.20462 lb/kg]
VOC TAP Speciate Hourly Rate [lb/hr] = Liquid Mass Fraction x Total VOC Average Hourly Rate [lb/hr]
Max Hourly Rate [lb/hr] = Average Hourly Rate [lb/hr]
Annual Emission Rate [tpy] = Average Hourly Rate [lb/hr] / Conversion Factor [2000 lb/ton] x Annual Operating Hours

Reference:
Emission Factors for Oil and Gas Production Operations , Table 9, Publication Number 4615, American Petroleum Institute, January 1995

Emission Calculation:

Component Type	Heavy Crude Emission Factor [kg/component-hr]	Average Hourly Rate [lb/hr]	Max Hourly Rate [lb/hr]	Annual Emission Rate [tpy]
valves	0.000013	0.01	0.01	0.02
pump seals	NA	--	--	--
flanges	0.000022	0.06	0.06	0.26
	Total VOC	**0.06**	**0.06**	**0.28**

VOC TAP Speciation	Liquid Mass Fraction[1]	Average Hourly Rate [lb/hr]	Max Hourly Rate [lb/hr]	Annual Emission Rate [tpy]
Benzene	0.0060	0.0004	0.0004	0.0017
Ethylbenzene	0.0040	0.0003	0.0003	0.0011
n-Hexane	0.0040	0.0003	0.0003	0.0011
Toluene	0.0100	0.001	0.001	0.0028
Xylenes	0.0140	0.001	0.001	0.0039
Cumene (Isopropyl benzene)	0.0010	0.0001	0.0001	0.0003
Iso-octane	0.0010	0.0001	0.0001	0.0003

Notes:
(1) VOC TAP Speciation Profile from TANKS 4.09.d for Crude Oil (RVP 8).

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Sept | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
10-78	Fugitive Emissions (Clovelly Dome)	Method 27,"Unknown" Datum NAD27
Tempo Subject Item ID No.		UTM Zone 15 Horizontal mE Vertical mN
FUG0001		Latitude ° ' " hundredths
		Longitude ° ' " hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Process Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft^2	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	constructed	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput		
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)		
Tank Diameter (ft)		
Tanks: Fixed Roof / Floating Roof	External / Internal	
Date Engine Ordered	Engine Model Year	
Date Engine Was Built by Manufacturer		
SI Engines: Rich Burn / Lean Burn	2 Stroke / 4 Stroke	

Emission Point ID No. (Designation): 10-78	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)				0.06	0.06	0.28	<0.01	C		ppm by vol
Benzene			00071-43-2	<0.001	<0.001	<0.01		A		ppm by vol
Ethyl benzene			00100-41-4	<0.001	<0.001	<0.01		A		ppm by vol
n-Hexane			00110-54-3	<0.001	<0.001	<0.01		A		ppm by vol
Toluene			00108-88-3	<0.001	<0.001	<0.01		A		ppm by vol
Xylene (mixed isomers)			01330-20-7	<0.001	<0.001	<0.01		A		ppm by vol

form_7203_r01
10/22/10

12. Proposed Project Emissions [LAC 33:III.517.D.3]

List the total emissions following the proposed project for this facility or process unit (for process unit-specific permits). Speciate all criteria pollutants, TAP, and HAP for the proposed project.

Pollutant	Proposed Emission Rate (tons/yr)
PM_{10}	0.50
$PM_{2.5}$	0.50
SO_2	0.43
NO_x	10.94
CO	2.41
VOC	418.26
2,2,4-Trimethylpentane	0.22
Benzene	2.49
Cumene	0.04
Ethylbenzene	0.27
n-Hexane	2.61
Toluene	1.37
Xylene	0.79

COPY

LDEQ RECEIPT

137 Northpark Blvd. • Covington, LA 70433
TELEPHONE (985) 276-6100 • FAX (985) 276-6279

2016 JUN 10 AM 11:16

June 10, 2016

HAND DELIVERED

Mr. Donald Trahan, Administrator
Louisiana Department of Environmental Quality
Office of Environmental Services
Permits Division
602 N. Fifth Street
Baton Rouge, Louisiana 70802

original to JOA
copy to Petro/Zhang
BATON

Re: LOOP, LLC – Port Complex
Title V Minor Modification Application
Permit Nos. 1560-00027-V1 and PSD-LA-796
Agency Interest No. 4634
Lafourche Parish, Louisiana
PER20160001

Dear Mr. Trahan:

LOOP LLC – Port Complex (LOOP) is hereby submitting the enclosed Title V Minor Modification Permit Application for the Clovelly Dome Storage Tank Project. The initial application for this project was submitted in December 2014 and Title V Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796 were subsequently issued in July 2015. This application proposes to revise the project by adding an additional five tanks, increasing the number of annual tank cleanings to two, and proposing control for tank cleaning activities.

As required by the Louisiana Department of Environmental Quality (LDEQ), LOOP is submitting three copies of this permit application. A check in the amount of $1,676.00 (Fee Code 1364) is also included to cover the review fees. LOOP is also submitting a request for Expedited Permit Processing with this application.

If you have any questions or require additional information, please contact me at 985-276-6299 or Kerry Brouillette of CK Associates at (225) 755-1000.

Sincerely,

Cynthia A. Gardner-Leblanc
LOOP LLC
Manager Regulatory Affairs

RECEIVED
JUN 10 2016
By

Enclosure
cc: Kerry Brouillette, CK Associates (without enclosure)

Monday, June 13, 2016
10:49:46 AM

RECEIPT OF CHECK

Master AI #:	4634
Name on Check:	Loop LLC
Master File Name:	LOOP LLC - Deepwater Port Complex
Check Received Date:	6/10/2016
Check Date:	6/10/2016
Check Number:	622224
Check Amount ($):	$1,676.00
Staff Entry:	SUNSHINEM
Date data entered:	6/13/2016
Media:	AIR
Reason:	Modification

Comments:

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
Office of Environmental Services • Public Participation & Permit Support Division
Post Office Box 4313 • Baton Rouge, LA 70821-4313
Customer Service: 225-219-LDEQ (5337) or Toll Free 1-866-896-LDEQ (5337)

REQUEST FOR EXPEDITED PERMIT PROCESSING

This form is to be submitted when an applicant requests consideration for expedited processing of permits, modifications, licenses, registrations, or variances in accordance with LAC 33:I.Chapter 18. Submission of this form shall in no way constitute approval of the expedited permit request. The Office will notify the applicant in writing of the decision to expedite processing of the requested permit application. **ALL INFORMATION MUST BE PROVIDED. Please submit one form for *each* activity for which expedited processing is requested.**

SECTION I - FACILITY INFORMATION

Agency Interest (AI) #	4634			**Permit # (if permitted)**			1560-00027-V1		
				Date Permit Application Submitted			June 10, 2016		
Media*	x	Air	**Type of Permit Action**		New Facility		x	Modified Facility	
		Water			General Permit			Variance	
		Solid Waste			License/Certification			Registration	
		Haz Waste			Renewal w/Modification			Water Quality Certification	

wner / Operator Name	LOOP LLC					
Facility Name	LOOP LLC Port Complex					
Mailing Address	Street	137 Northpark Drive				
	City	Covington	State	LA	Zip	70433
Technical Contact Available After Normal Work Hours	Name	Cynthia A. Gardner-LeBlanc				
	Phone	985-276-6299				
	Cell Phone	504-289-6307				
	Fax	985-276-6290				
	E-mail	cgleblanc@loopllc.com				

SECTION II - EXPEDITED PERMIT INFORMATION

1. How many new permanent jobs will result from this permit action?	None				
2. Date requested for final permit decision		**or**	x	As soon as possible	
3. Is construction activity proposed in permit application?	x	Yes		No	
4. Does the applicant owe any outstanding fees to LDEQ?		Yes	x	No	
If you answered "Yes" to No. 4, above, attach explanation to this form.					
5. Is there a limit to the amount you are willing to pay to expedite the permit?	x	Yes		No	

If you answered "Yes" to No. 5, above, please read and complete the following:

I understand that if such a maximum amount is requested, the number of overtime hours a department employee or contractor works processing the permit, modification, license, registration, or variance shall be limited accordingly. If further processing of the document is required, the department's continued review will not be in accordance with the provisions of this Chapter, and the request will no longer be handled on an expedited basis. I understand that the department will charge a fee for the expedited processing which was performed. (LAC 33:I.1805).

I wish to limit the expedited permit fee to:	**$ 5,000**	
Provide the basis or need for this expedited permit request.	**Construction of the 5 proposed tanks will enable Clovelly Farms to meet market demands dictated by crude slates transferred into and out of the facility.**	

SECTION III - PUBLIC NOTICE

Public notice of all expedited permit processing will be provided in accordance with LAC 33:I.1809.A.

SECTION IV - CERTIFICATIONS

Check the appropriate box regarding pending enforcement actions and lawsuits.

[x] *I certify that as owner/operator I am not subject to any pending state or federal enforcement actions, including citizen suits brought under state or federal law for the subject facility or any other facility I own or operate.*

or

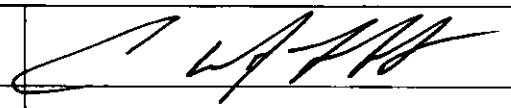
[ ] *I am currently subject to pending state or federal enforcement actions, including citizen suits brought under state or federal law for the subject facility or any other facility I own or operate.*

Please read and complete the following:

I, as the duly authorized responsible official for the subject facility, certify in accordance with LAC 33:I.1803.C, that should additional information be required to complete the permit process, all requested information will be provided within the timeframes specified by the department.

I understand that:

- *If the requested information is not provided within the timeframes specified, or if the limit I have indicated as a maximum amount to be paid for expedited processing is reached, the Department reserves the right to cease processing the permit, modification, license, registration, or variance as an expedited permit.*
- *If the department ceases expedited permit processing, I will be billed for the expedited processing that occurred in accordance with LAC 33: I.1805.B.*
- *There is no guarantee that a final permit decision will be issued by the date I have requested.*
- *The submittal of this request does not release me from liability for any violations related to this activity or the Environmental Quality Act.*
- *A permit may be required prior to any construction at the site, operation of the proposed activity or commencement of discharges from this proposed activity, and I should refer to media-specific regulations for this information.*

Signature of Responsible Official		**Title**	Vice President of Engineering and Technology
rinted Name	Chris A. Labat	**Date**	6/9/16

Title V Permit Minor Modification Application

Clovelly Tank Facility

Crude Oil Storage Tank Project

LOOP LLC – Port Complex

Galliano/Leeville, Louisiana

Lafourche Parish

Agency Interest No. 4634

Application for Permitted Project - December 2014

Additional Information - April 2015

Application for Modified Project – June 2016

Prepared by:

CK Associates
Environmental Consultants

17170 Perkins Road
Baton Rouge, LA 70810
225-755-1000

CK Project Number: 11465

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SECTION 1

INTRODUCTION

1.0 Introduction

The LOOP LLC – Port Complex (LOOP) currently operates under Title V Permit No. 1560-00027-V1 and PSD-LA-796, issued July 30, 2015. The current permits approved the Clovelly Tank Facility Crude Oil Storage Tank Project (Project). LOOP is submitting a Title V Permit Minor Modification Application to propose a modification to this project. LOOP is a major source of criteria pollutants and a minor source of LAC 33:III.Chapter 51 Toxic Air Pollutants (TAPs).

1.1 Facility Description

LOOP is located in Lafourche Parish, Louisiana and the Gulf of Mexico. The LOOP Port Complex consists of the Clovelly Dome Storage Terminal (Terminal) in Galliano, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59, Gulf of Mexico. Figure 1 depicts the site locations of the three (3) land-based facilities relative to each other. The Terminal consists of nine (9) underground storage caverns and 15 operational aboveground storage tanks. The caverns and tanks provide storage for oil prior to pipeline delivery. Eight of the caverns have a capacity of approximately 6.7 MMbbls of oil, and one cavern has a capacity of approximately 4 MMbbls of oil. The combined storage tanks have a capacity of 9 MMbbls (the 15 operational tanks).

The Terminal also consists of surface facilities located in the same general vicinity which include a Brine Storage Reservoir, Operations Building, fuel and slop oil tanks, emergency electric generators, and ancillary equipment. The Small Boat Harbor, located on Bayou Lafourche, shelters crew and work boats and includes hose testing facilities. The Fourchon Booster Station is a secured unmanned facility with two large diesel storage tanks and a few small storage tanks. Emission control systems utilized at the LOOP facilities include the latest storage tank technology, mechanical seals on pumps, and low sulfur fuel oil.

1.2 Project Description

With the December 2014 Title V and PSD Application, LOOP proposed to expand its Clovelly Dome Storage Terminal to include six (6) additional crude oil storage tanks, each having a capacity of 371,000 bbl. The project was approved with the issuance of Title V Permit No. 1560-00027-V1 and PSD Permit No. PSD-LA-796.

Due to the proposed addition of tanks in December 2014, a review of the basis for the emissions calculation for roof landing emissions was conducted; as a result, the emissions estimate was increased, based on an increase in the frequency of roof landings. An emissions estimate for tank cleanings was also proposed with the December 2014 project. Both of these activities were approved with the issuance of the July 2015 permits.

With the current application, LOOP is proposing to add an additional five (5) crude oil storage tanks, one (1) with a capacity of 371,000 bbl and four (4) with a capacity of 600,000 bbl. All eleven (11) new tanks will be external floating roof tanks (EFRs). The 371,000 bbl tanks are 243 feet in diameter whereas the 600,000 bbl tanks are 310 feet in diameter. The overall tank capacity will be increased from 9 MMbbl (15 operational tanks) to approximately 14 MMbbls (15 operational tanks plus 11 tanks proposed per the December 2014 and current applications). The throughput that is the basis of the emissions calculation for routine tank operation emissions is proposed to increase from 200 MMbbl/yr to 250 MMbbl/yr. Also with this application, LOOP is requesting the addition of one 500 KW diesel-fuel fired emergency electric generator and an associated diesel tank (insignificant activity) and that the tank cleaning emissions estimate be changed as follows: 1) base the emissions on two tank cleanings per year rather than one tank cleaning, and 2) control the VOC emissions with a portable thermal oxidizer. The portable thermal oxidizer has been proposed as a GCXVII activity. LOOP is not requesting additional roof landings as part of this modification.

Refer to Figure 2, Plot Plan for the location of the 11 tanks proposed per the December and current applications. See Table 1 below for a list of all tanks (permitted and proposed) that are part of the Crude Oil Storage Tank Cap.

Table 1
Storage Tanks CAP – Tank Permit Status

TEMPO ID	EPN	Description	Capacity (bbl)	Tank Permit Status
GRP0003	-	Crude Oil Storage Tank CAP (Clovelly Dome)	-	-
EQT0027	1-99	Tank 6401 (Clovelly Dome)	600,000	Permitted
EQT0028	2-99	Tank 6402 (Clovelly Dome)	600,000	Permitted
EQT0029	3-99	Tank 6405 (Clovelly Dome)	600,000	Permitted
EQT0030	4-99	Tank 6406 (Clovelly Dome)	600,000	Permitted
EQT0031	6-02	Tank 6409 (Clovelly Dome)	600,000	Permitted
EQT0032	7-02	Tank 6410 (Clovelly Dome)	600,000	Permitted
EQT0033	8-07	Tank 6403 (Clovelly Dome)	600,000	Permitted
EQT0034	9-07	Tank 6404 (Clovelly Dome)	600,000	Permitted
EQT0035	10-07	Tank 6407 (Clovelly Dome)	600,000	Permitted
EQT0036	11-07	Tank 6408 (Clovelly Dome)	600,000	Permitted
EQT0037	12-07	Tank 6411 (Clovelly Dome)	600,000	Permitted
EQT0038	13-07	Tank 6412 (Clovelly Dome)	600,000	Permitted
EQT0039*	14-07	Tank 6413 (Clovelly Dome)	600,000	Deleted
EQT0040	15-07	Tank 6414 (Clovelly Dome)	600,000	Permitted
EQT0041*	16-10	Tank 6415 (Clovelly Dome)	600,000	Deleted
EQT0042	17-10	Tank 6416 (Clovelly Dome)	600,000	Permitted
EQT0043	18-10	Tank 6417 (Clovelly Dome)	600,000	Permitted
EQT0044*	19-10	Tank 6418 (Clovelly Dome)	600,000	Deleted
EQT0045*	20-10	Tank 6419 (Clovelly Dome)	600,000	Deleted
EQT0046*	21-10	Tank 6420 (Clovelly Dome)	600,000	Deleted
EQT0048	22-14	Tank 6413 (Clovelly Dome)	371,000	Permitted
EQT0049	23-14	Tank 6415 (Clovelly Dome)	371,000	Permitted
EQT0050	24-14	Tank 6418 (Clovelly Dome)	371,000	Permitted
EQT0051	25-14	Tank 6419 (Clovelly Dome)	371,000	Permitted
EQT0052	26-14	Tank 6420 (Clovelly Dome)	371,000	Permitted
EQT0053	27-14	Tank 6421 (Clovelly Dome)	371,000	Permitted
EQTTBD	28-16	Tank 6422 (Clovelly Dome)	371,000	Proposed
EQTTBD	29-16	Tank 6423 (Clovelly Dome)	600,000	Proposed
EQTTBD	30-16	Tank 6424 (Clovelly Dome)	600,000	Proposed
EQTTBD	31-16	Tank 6425 (Clovelly Dome)	600,000	Proposed
EQTTBD	32-16	Tank 6426 (Clovelly Dome)	600,000	Proposed

* Tanks previously permitted prior to the current permit and never constructed.

1.3 Crude Oil Storage Tank Cap

LOOP operations, under their initial Title V Permit No. 1560-00027-V0, included a numerical total volatile organic compound (VOC) emissions limit for the crude oil storage tank cap, which included routine tank operation emissions as well as landing and filling activities. A hypothetical operating scenario (throughput amount, frequency of roof landings) was used to estimate emissions from these tank activities. No separate limits were placed on routine operations or landing and filling activities. So long as the emissions limit for the cap was not exceeded, LOOP was considered to be in compliance with the Title V permit.

With the issuance of Title V Permit No. 1560-00027-V1, five Specific Requirements (SRs) were added to GRP0003, under LAC 33:III.509, Nos. 107 – 111 and the SR for the annual cap report was revised. Best Available Control Technology (BACT) requirements for routine operations is SR No. 107, for cleanings are SR Nos. 108 and 109, and for landings are SR Nos. 110 and 111. SR Nos. 108 and 111 contain numerical limits for cleaning and landings, respectively and SR No. 107 requires that separate calculations be kept on a rolling basis for these limits. In keeping with the previous flexibility within the cap as allowed in Title V Permit No. 1560-00027-V0, LOOP requests that SR Nos. 108 and 111 be removed from the permit and that SR No. 107 be revised to reflect only a rolling 12-month emission calculation based on the annual VOC emissions of the storage tank cap. This allows the facility to vary parameters (throughput and frequency of landings and cleanings) as operational requirements dictate within the constraints of the permit emissions for the cap.

The operating scenario that LOOP is proposing in this application is presented as an example only. In other words, there is a proposed overall Total VOC emissions estimate that is based on variables such as the annual throughput amount and the frequency of roof landings/cleanings. As previously granted by the LDEQ upon issuance of Title V Permit No. 1560-00027-V0, LOOP requests that the permit not contain any explicit throughput limits or limits on frequency of roof landings or degassing/cleaning. LOOP requests to have the flexibility to vary these parameters as operational requirements dictate under the constraints of the permit limit for the cap.

Note that the PSD permit does not contain numerical limits and BACT for storage tanks is determined as follows in the issued PSD Permit:

1) BACT is determined to be storage vessels equipped with EFRs to limit VOC emissions.
2) BACT is determined to be limiting the time that the floating roof is landed and complying with 40 CFR 60.112b(a)(2)(iii) during each roof landing event.
3) BACT is limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during a tank cleaning.

1.4 Title V Permit Reconciliation

In addition to modifying the project, as previously described in this application, LOOP additionally proposes to reconcile the permit as follows:

- Remove EQT0013, EPN 19-78, Portable Diesel Generator (Clovelly Dome); this is a mobile source and is therefore not required to be permitted; and
- Modify the description of EQT0011, EPN 17-78 by removing "(Clovelly Dome)".

1.5 Proposed Emission Changes

This application and emissions estimates were prepared with the best data available at the time. Emissions calculations are located in Appendix A of this application binder.

Table 2 provides a history of the Crude Oil Storage Tank Cap VOC emissions over the initial permit and the current application request. This table demonstrates that the change in emissions due to the Clovelly Tank Facility Crude Oil Storage Tank Project would not change the PSD requirements of the project when considering the five additional proposed tanks together with the previously permitted addition of six tanks as represented in Title V Permit No. 1560-00027-V1.

Additionally, the table shows that the proposed modification of adding five additional tanks results in an overall decrease in facility VOC emissions as a result of proposing to control tank degassing and cleaning events.

Table 2
History of Crude Oil Storage Tank Cap VOC Emissions

VOC Limit TPY - Permit No. 1560-00027-V1					
	Existing Tanks (15 tanks)	New Tanks (6 tanks)	Roof Landings (90 per Year)	Degassing/Cleaning (1 uncontrolled event/yr)	Total
Total VOC	67.98	25.97	293.09	43.72	**430.75**
VOC Limit TPY - Permit Application					
	Existing Tanks (15 tanks)	New Tanks (11 tanks)	Roof Landings (90 per Year)	Degassing/Cleaning (2 controlled events/yr)	Total
Total VOC	67.98	48.59	293.09	1.54	**411.19**
Change in Emissions Due To Proposed Modification					
Total VOC					**-19.56**

SECTION 2

REGULATORY APPLICABILITY

2.0 Regulatory Applicability

Section 22 of the Application for Approval of Emissions of Air Pollutants (AAEAP) contains the federal and state air quality requirements for each point source that are proposed with this application. With the current application proposing a modified Clovelly Tank Facility Crude Oil Storage Tank Project, it is proposed that the cap (GRP0003 and CRG0002) will be modified to include five additional tanks. These regulations are discussed below.

2.1 Louisiana Administrative Code (LAC)

Chapter 21 Control of Emission of Organic Compounds

Chapter 21 addresses such activities as control of emissions of organic compounds from storage tanks, fugitives, and best practical housekeeping and maintenance practices of organic compound emissions.

LOOP complies with all applicable provisions of this Chapter in a timely and forthcoming manner.

2.2 New Source Performance Standards (NSPS)

NSPS Subpart A General Provisions (40 CFR Part 60.1)

This subpart contains general notification, recordkeeping, and monitoring requirements that apply to any source subject to any NSPS regulation, unless the NSPS regulation specifically exempts the source from the provisions of this subpart.

LOOP complies with all applicable provisions of this Chapter in a timely and forthcoming manner.

NSPS Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR Part 60.110b)

The existing crude oil storage tanks, permitted under the existing tank cap (GRP003) are subject to this subpart, as will be the eleven (11) new tanks. Each proposed crude oil storage tank is equipped with an EFR that meets all of the requirements of Subpart Kb.

2.3 Prevention of Significant Deterioration (PSD) (LAC 33:III.509 and 40 CFR 52)

The requirements of LAC 33:III.509 (PSD) apply to the major modification of any existing major stationary source. The LOOP LLC – Port Complex is an existing major stationary source.

According to LAC 33:III.509.A.4.a, a project is a major modification for a regulated new source review (NSR) pollutant if it causes two types of emissions increases – a significant emissions increase and a significant net emissions increase, as defined in LAC 33:III.509.B. The initial Clovelly Tank Facility Crude Oil Storage Tank Project resulted in a significant increase of VOC and underwent PSD permitting, resulting in the issuance of PSD Permit No. PSD-LA-796 on July 30, 2015. The current proposed project is a modification of the previous project and adds five additional EFR crude oil storage tanks. The proposed tanks in this application are being treated as if they were applied for in and approved in the current Title V and PSD permits and this application contains all such requirements of PSD permitting. However, as shown previously in Table 2, the project as proposed in this application results in a decrease in site VOC emissions and results in a minor modification to the existing permits.

Emissions for the Clovelly Tank Facility Crude Oil Storage Tank Project (for the pollutants triggering PSD review) are set forth in the table below. Amounts are listed in tons per year (TPY). Table 3 provides a summary of the tank cap emissions as a result of this request.

Table 3
PSD Analysis for Clovelly Tank Facility Crude Oil Storage Tank Project

Source	Pollutant	Current Permit Cap Emissions	Proposed Cap Emissions	Delta	PSD Significant Emissions Rate	PSD Review Required?
GRP0003	VOC	430.75	411.19	-19.56	40	No

Additionally, the project will not result in a significant emissions increase of any other regulated NSR pollutant.

SECTION 3
BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

3.0 Best Available Control Technology (BACT)

The initial project underwent a BACT Analysis and the following was determined to be BACT per that analysis, as listed in PSD-LA-796:

1) BACT for Routine Operations of Storage Vessels; BACT is determined to be storage vessels equipped with EFRs to limit VOC emissions.
2) BACT for Floating Roof Tank Landings; BACT is determined to be limiting the time that the floating roof is landed and complying with 40 CFR 60.112b(a)(2)(iii) during each roof landing event.
3) BACT for Floating Roof Tank Cleanings; BACT is limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning.

The modified project involves including an additional five EFR tanks, an additional tank cleaning, and controlling tank cleaning emissions with a portable thermal oxidizer. As shown below, LOOP proposes that the conclusions from the initial BACT Analysis remain, with one exception. LOOP proposes to control tank cleaning emissions with a portable thermal oxidizer with a control efficiency of 98%. The initial project BACT determination for the proposed tank cleaning was no additional control.

3.1 BACT for Routine Operations of Storage Vessels – VOC

For BACT for Routine Operations of Storage Vessels, LOOP proposes that the approved BACT Analysis remain the same: BACT is determined to be storage vessels equipped with EFRs to limit VOC emissions.

The initial project and BACT Analysis involved 371,000 bbl tanks; the modified project includes 371,000 bbl and 600,000 bbl tanks. The annual emissions estimate is similar for both size tanks and therefore would have minimal effect on the initial BACT Analysis.

With regard to the use of a closed vent system and control device, this option was eliminated in the original BACT Analysis based on a cost that exceeded $100,000 per ton controlled. The cost of the control device is relatively the same; thus the minimal difference in emissions minimally affects the calculation of the lb/ton controlled. The cost to employ a closed vent system and control device continues to exceed $100,000/ton

controlled. Therefore, LOOP continues to propose that this option is economically infeasible.

With regard to the use of an internal floating roof (IFR), this option was eliminated in the initial BACT Analysis based on a cost that exceeded $75,000 per ton controlled. The cost of adding an IFR to the smaller tanks was deemed economically infeasible; the cost of adding an IFR to a larger tank would also be economically infeasible when considering just the cost of the required steel to construct the roof. Again, there is a minimal difference between IFR and EFR tanks with regard to the annual emissions estimate. The cost of implementing an IFR for the proposed tanks continues to exceed the accepted cost per ton controlled; therefore, LOOP proposes that this option remains economically infeasible.

3.2 BACT for Floating Roof Tank Landings – VOC

For BACT for Floating Roof Tank Landings, LOOP proposes that the approved BACT Analysis remain as is since there are no changes to this activity with the modified project. LOOP is not proposing additional tank landings with this application.

BACT is determined to be limiting the time that the floating roof is landed and complying with 40 CFR 60.112b(a)(2)(iii) during each roof landing event.

3.3 BACT for Floating Roof Tank Cleanings – VOC

For BACT for Floating Roof Tank Cleanings, LOOP proposes that the approved BACT Analysis remain as follows: BACT is limiting the amount of time between the cessation of pumping out product and the start of liquid heel and sludge removal from the tank floor during floating roof cleaning.

However, with this application, LOOP also proposes to control tank emissions during degassing and cleaning activities with a portable thermal oxidizer with a control efficiency of 98%. LOOP contracts third party suppliers to perform tank cleanings and will contractually require the use of a thermal oxidation device achieving a minimum 98% control efficiency.

SECTION 4
ADDITIONAL IMPACT ANALYSIS

4.0 Additional Impact Analysis

4.1 Growth Analysis

The proposed project should not result in any significant residential, commercial, or industrial growth outside the facility since existing, surrounding establishments will likely support any locally dependent construction and operation needs. Thus, no significant air quality degradation due to associated residential, commercial, or industrial growth is expected.

4.2 Air Quality Impact Analysis

Since there will not be any air emissions from associated growth resulting from the project, adverse ambient air quality impacts resulting from growth are not expected.

4.3 Soils and Vegetation Analysis

Since the projected ambient air concentrations of ozone are not significant, the project is not expected to adversely impact the soil and vegetation in the area surrounding the Clovelly Dome Storage Terminal.

4.4 Visibility Impact Analysis

Sources of air pollution can cause visible plumes if emissions of particulates and nitrogen oxides are sufficiently large. The proposed project will not cause an increase of particulates above the significant emission rate and there will be no increase in nitrogen oxides. Therefore, the proposed project will not cause visibility impairment in the area surrounding the site.

4.5 Class I Area Impacts

The Breton National Wildlife Refuge is approximately 60 miles from the Clovelly Dome Storage Terminal. As such a Class I area analysis is required. An Ozone Ambient Impact Analysis is presented in the next section to satisfy this requirement.

4.6 Ozone Impact Analysis

Provisions of 40 CFR 52.21, Prevention of Significant Deterioration (PSD) of Air Quality and LAC 33:III.509.I.5.a allow an exemption from ambient monitoring requirements for ozone if the following requirement is met.

Any net increase of 100 tons per year or more of volatile organic compounds or nitrogen oxides subject to PSD requires the performance of an ambient impact analysis including the gathering of ambient air quality data.

The proposed project-related emissions for this project are 235.91 tons per year of VOC. As such, an ozone impact analysis, including the gathering of ambient air quality data, has been conducted and is described below. There is no proposed increase in nitrogen oxides emissions.

Effective December 28, 2015, the primary NAAQS for ozone is an 8-hour average of 0.07 ppm. This value represents the annual fourth-highest daily maximum 8-hour ozone concentration, averaged over a three-year period.

To assess the impacts of the proposed project on the regional ozone level, LOOP utilized the background concentrations from the closest existing monitoring station located in Thibodaux, Lafourche Parish, LA (AQS Site ID: 22-057-0004). This monitoring station is approximately 38 miles north-west of the site location. It is operated and maintained by the Louisiana Department of Environmental Quality.

Since ozone is regarded as a regional issue, LOOP believes that the data from this monitoring station, by virtue of its location and proximity, is representative of the ozone level surrounding the LOOP facility. Also note that the prevailing wind from the site is toward this monitor (from the southeast).

4.7 Current Ozone Assessment

The following table summarizes the current ozone design value for this monitoring station as reported by the EPA (http://www.epa.gov/airtrends/values.html). As shown, the NAAQS for ozone is not exceeded and the area is currently classified as *in attainment*. In fact, all of Louisiana is classified as *in attainment* for ozone

with the exception of the Baton Rouge 5-Parish Ozone Nonattainment Area which is classified as *marginal nonattainment*.

Table 4
Current Ozone Design Value

AWS Site ID	Location	2012-2014 Design Value (ppm)
22-057-0004	Thibodaux, Lafourche Parish	0.068

4.8 Historical Trend Consideration

LOOP has reviewed historical ozone concentration data to determine if there are any noticeable trends of ambient ozone levels in the area surrounding the facility. This is intended to provide a general sense of whether the ozone levels in the affected area are or will be in danger of exceeding the standard based on past actual data and ozone level trends. The following table summarizes this data.

Table 5
Historical Ozone Concentration Data

	Ozone Design Values (ppm)									
AQS Site ID	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014
22-057-0004	0.079	0.080	0.079	0.077	0.072	0.071	0.072	0.074	0.071	0.068

As shown above, there is a noticeable downward trend in the ambient ozone levels beginning from the 2003-2005 timeframe to the present. This trend shows overall positive movement in regard to ambient ozone concentrations from 2003 to the present.

4.9 Projected Emissions Relative to Existing Emissions

The LOOP facility is located in Lafourche Parish, Louisiana. This parish is designated as *in attainment* with regard to the 2015 8-hour ozone standard. The proposed project will result in VOC emissions of 235.91 tons per year which is above the PSD significance level of 40 tons per year and above the 100 tons per year threshold which requires this ambient impact analysis.

The following table provides a comparison of the proposed project-related emissions of VOC at the LOOP facility to the 2015 reported emissions from the surrounding parishes of the facility, including Lafourche Parish which is where the facility is located. This data was obtained from the LDEQ Emission Reporting and Inventory Center (ERIC) database.

Table 6
LOOP Project Emissions vs. 2015 VOC from Surrounding Parishes

Parish	Total VOC Emissions (tons)
Assumption	291
Jefferson	324
Lafourche	577
St. Charles	3,349
Terrebonne	434
St. James	1,413
St. John the Baptist	897
Surrounding Parish Total	7,285
LOOP Proposed VOC	235.91
LOOP Proposed VOC + Parish Total	7,520.91
Percent Increase	3.24%

As shown, the proposed project-related VOC emissions will only increase the existing total emissions within the surrounding area by approximately 3.24%.

4.10 Conclusion

LOOP has performed a qualitative analysis of emissions in the area surrounding the facility before and after the proposed project, as well as a review of the historic ozone levels at a representative ozone monitoring station. Based on the emissions associated with the project relative to the overall emission levels in the surrounding area, as well as the downward trend in ozone levels, LOOP believes that the proposed project will have no impact on ozone levels in and around the facility.

SECTION 5

APPLICATION FOR APPROVAL OF EMISSIONS OF AIR POLLUTANTS FROM PART 70 SOURCES

Department of Environmental Quality Office of Environmental Services Air Permits Division P.O. Box 4313 Baton Rouge, LA 70821-4313 (225) 219-3181	**LOUISIANA** **Application for Approval of Emissions of Air Pollutants from Part 70 Sources**	DEQ LOUISIANA

PLEASE TYPE OR PRINT

1. Facility Information [LAC 33:III.517.D.1]

Facility Name or Process Unit Name (if any) LOOP LLC – Port Complex	☒ All Process Units ☐ Process Unit-specific Permit
Agency Interest Number (A.I. Number) 4634	**Currently Effective Permit Number(s)** 1560-00027-V1
Company - Name of Owner LOOP LLC	
Company - Name of Operator (if different from Owner)	
Parent Company (if Company – Name of Owner given above is a division)	

Ownership:
Check the appropriate box.

☐ corporation, partnership, or sole proprietorship ☐ regulated utility ☐ municipal government

☐ state government ☐ federal government ☒ other, specify LLC

2. Physical Location and Process Description [LAC 33:III.517.D.18, unless otherwise stated]

What does this facility produce? Add more rows as necessary.
The LOOP LLC - Port Complex (LOOP) consists of the Clovelly Dome Storage Terminal in Galliano, the Small Boat Harbor in Leeville, the Fourchon Booster Station in Leeville, and the Marine Offloading Terminal in Grand Isle Block 59, Gulf of Mexico. LOOP is currently permitted to handle 200 MMbbls of crude oil per year through the Clovelly Dome storage tanks.

What modifications/changes are proposed in this application? Add more rows as necessary.
Please see Section 1 of the report text in this binder for a complete description of the modifications/changes that are proposed in this application.

Nearest town (in the same parish as the facility): Galliano
Parish(es) where facility is located: Lafourche

Distance To (mi):	215 Texas	250 Arkansas	65 Mississippi	125 Alabama
Latitude of Facility Front Gate:	29 Deg	27 Min	45 Sec	____ Hundredths
Longitude of Facility Front Gate:	90 Deg	18 Min	20 Sec	____ Hundredths
Distance from nearest Class I Area:	60	kilometers		

Add physical address and description of location of the facility below. If the facility has no address, provide driving directions. Add more rows as necessary.
LOOP LLC - Port Complex is located in Lafourche Parish, Louisiana.

☒ Map attached (required per LAC 33:III.517.D.1)
☒ Description of processes and products attached (required per LAC 33:III.517.D.2)
☒ Introduction/Description of the proposed project attached (required per LAC 33:III.517.D.5)

3. Confidentiality [LAC 33.I.Chapter 5]

Are you requesting confidentiality for any information except air pollutant emission rates? ☐ Yes ☒ No

If "yes," list the sections for which confidentiality is requested below. Add rows as necessary. Confidentiality requests require a submittal that is separate from this application. Information for which confidentiality is requested should not be submitted with this application. Consult instructions.

4. Type of Application [LAC 33:III.517.D]

Complete the appropriate column (1 or 2) that corresponds to the type of permit being sought. Check all that apply within the appropriate column.

Column 1	Column 2
☐ Part 70 General	☒ Part 70 Regular
☐ Renewal	☐ Renewal
Select one, if applicable: ☐ Entirely new facility ☐ Modification or expansion of existing facility (may also include reconciliations) ☐ Reconciliation only ☐ Individual emissions unit(s) addition	Select one, if applicable: ☐ Entirely new facility ☐ Significant modification or expansion of existing facility (may also include reconciliations) [LAC 33:III.527] ☒ Minor modification or expansion of existing facility (may also include reconciliations) [LAC 33:III.525] ☐ Reconciliation only
	NSR Analysis: PSD ☐ NNSR ☐

Does this submittal update or replace an application currently under review? ☐ Yes ☒ No

If yes, provide date that the prior application was submitted: _____

Select one if this application is for an existing facility that does not have an air quality permit:

☐ Previously Grandfathered (LAC 33:III.501.B.6)
☐ Previously Exempted (e.g., Small Source Exemption; LAC 33:III.501.B.2.d)
☐ Previously Unpermitted

5. Fee Information [LAC 33:III.517.D.17]

Fee Parameter: If the fee code is based on an operational parameter (such as number of employees or capital cost), enter that parameter here. _____

Industrial Category: Enter the Standard Industrial Classification (SIC) and North American Industry Classification (NAICS) Codes that apply to the facility.

Primary SICC: 4612 **NAICS Code:** 486110

Secondary SICC(s): _____

Project Fee Calculation: Enter fee code, permit type, production capacity/throughput, and fee amount pursuant to LAC 33:III.Chapter 2. Add rows to this table as needed. Include with the application the amount in the Grand Total blank as the permit application fee.

FEE CODE	TYPE	EXISTING CAPACITY	INCREMENTAL CAPACITY INCREASE	SURCHARGES				
				MULTIPLIER	NSPS	PSD	AIR TOXICS	TOTAL AMOUNT
1364	Minor	69 MMbbls	2.8 MMbbls	N/A	☐	☐	☐	$1,676
					GRAND TOTAL			$1,676

****Optional** Fee Explanation:** Use the space provided to give an explanation of the fee determination displayed above. Using this area will help to avoid confusion.

Electronic Fund Transfer (EFT): If paying the permit application fee using an Electronic Fund Transfer (EFT), please include the EFT Transaction Number, the Date that the EFT was made, and the total dollar amount submitted in the EFT. If not paying the permit application fee using EFT, leave blank.

EFT Transaction Number	Date of Submittal	Total Dollar Amount
		$

6. Key Dates

Estimated date construction will commence: 9/2016 *Estimated date operation will commence:* 3/2017

7. Pending Permit Applications – For Process Unit-Specific Permits Only [LAC 33:III.517.D.18]

List all other process units at this facility for which Part 70 permit applications have been submitted, but have not been acted upon by LDEQ as of the date of submittal of this application. If none, state "none" in the table. ****It is not necessary to update this table during the permit review process, unless requested by LDEQ.*****

Process Unit Name	Permit Number	Date Submitted
NA		

8. LAC 33:I.1701 Requirements – Answer all below for new sources and permit renewals - ☐ Yes ☒ No

Does the company or owner have federal or state environmental permits identical to, or of a similar nature to, the permit for which you are applying in Louisiana or other states? (This requirement applies to all individuals, partnerships, corporations, or other entities who own a controlling interest of 50% or more in your company, or who participate in the environmental management of the facility for an entity applying for the permit or an ownership interest in the permit.)
☐ **Yes** ☐ **No**

If yes, list States: _____

Do you owe any outstanding fees or final penalties to the Department? ☐ **Yes** ☐ **No**
If yes, explain below. Add rows if necessary.

Is your company a corporation or limited liability company? ☐ **Yes** ☐ **No**
If yes, attach a copy of your company's Certificate of Registration and/or Certificate of Good Standing from the Secretary of State. The appropriate certificate(s) should be attached to the end of this application as an appendix.

9. Permit Shield Request [LAC 33:III.517.E.7] - ☐ Yes ☒ No

If yes, check the appropriate boxes to indicate the type of permit shield being sought. Include the specific regulatory citation(s) for which the shield is being requested. Give an explanation of the circumstances that will justify the permit shield request. Attach additional pages if necessary. If additional pages are used, attach them directly behind this page and enter "See Attached Pages" into the Explanation field.

Type of Permit Shield request (check all that apply):

Non-applicability determination for:	Specific Citation(s)	Explanation
☐ 40 CFR 60		
☐ 40 CFR 61		
☐ 40 CFR 63		
☐ Prevention of Significant Deterioration		
☐ Nonattainment New Source Review		

Interpretation of monitoring, recordkeeping, and/or reporting requirements, and/or means of compliance for:	Specific Citation(s)	Explanation
☐ 40 CFR 60		
☐ 40 CFR 61		
☐ 40 CFR 63		
☐ Prevention of Significant Deterioration		
☐ Nonattainment New Source Review		
☐ State Implementation Plan (SIP) Regulation(s) referenced in 40 CFR 52 Subpart T		

10. Certification of Compliance With Applicable Requirements

Statement for Applicable Requirements for Which the Company and Facility Referenced In This Application Is In Compliance

Based on information and belief, formed after reasonable inquiry, the company and facility referenced in this application is in compliance with and will continue to comply with all applicable requirements pertaining to the sources covered by the permit application, as outlined in Tables 1 and 2 in the permit application. For requirements promulgated as of the date of this certification with compliance dates effective during the permit term, I further certify that the company and facility referenced in this application will comply with such requirements on a timely basis and will continue to comply with such requirements.

For corporations only: By signing this form, I certify that, in accordance with the definition of Responsible Official found in LAC 33:III.502, **(1)** I am a president, secretary, treasurer, or vice-president in charge of a principal business function, or other person who performs similar policy or decision-making functions; or **(2)** I am a duly authorized representative of such person; am responsible for the overall operation of one or more manufacturing, production, or operating facilities addressed in this permit application; and either the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or the delegation of authority has been approved by LDEQ prior to this certification.*

CERTIFICATION: I certify, under provisions in Louisiana and United States law which provide criminal penalties for false statements, that based on information and belief formed after reasonable inquiry, the statements and information contained in this Application for Approval of Emissions of Air Pollutants from Part 70 Sources, including all attachments thereto and the compliance statement above, are true, accurate, and complete.

a. Responsible Official		
Name Chris A. Labat		
Title Vice President of Engineering and Technology		
Company LOOP LLC		
Suite, mail drop, or division		
Street or P.O. Box 137 Northpark Boulevard		
City Covington	State LA	Zip 70433
Business phone 985-276-6235		
Email Address calabat@looplic.com		

Signature of responsible official (See 40 CFR 70.2):
Date: 6/9/16

*Approval of a delegation of authority can be requested by completing a Duly Authorized Representative Designation Form (Form_7218) available on LDEQ's website at http://www.deq.louisiana.gov/portal/tabid/2758/Default.aspx

CERTIFICATION: I certify that the engineering calculations, drawings, and design are true and accurate to the best of my knowledge.

b. Professional Engineer		
Name Vinh Nguyen		
Title Project Engineer		
Company CK Associates		
Suite, mail drop, or division		
Street or P.O. Box 17170 Perkins Road		
City Baton Rouge	State LA	Zip 70810
Business phone 225-755-1000		
Email Address vinh.nguyen@c-ka.com		

Signature of Professional Engineer:
Date:
Louisiana Registration No.

11. Personnel [LAC 33:III.517.D.1]

a. Manager of Facility who is located at plant site		
Name Darren Faucheux	☐ Primary contact	
Title Operations and Maintenance Superintendent		
Company LOOP LLC		
Suite, mail drop, or division		
Street or P.O. Box 224 East 101 Place		
City Cut Off	**State** LA	**Zip** 70345
Business phone 985-632-1306		
Email address dpfaucheux@loopllc.com		

b. On-site contact regarding air pollution control		
Name Darren Faucheux	☐ Primary contact	
Title Operations and Maintenance Superintendent		
Company LOOP LLC		
Suite, mail drop, or division		
Street or P.O. Box 224 East 101 Place		
City Cut Off	**State** LA	**Zip** 70345
Business phone 985-632-1306		
Email address dpfaucheux@loopllc.com		

c. Person to contact with written correspondence		
Name Cynthia A. Gardner-LeBlanc	☒ Primary contact	
Title Manager of Regulatory Affairs		
Company LOOP LLC		
Suite, mail drop, or division		
Street or P.O. Box 137 Northpark Boulevard		
City Covington	**State** LA	**Zip** 70433
Business phone 985-276-6299		
Email address cgleblanc@loopllc.com		

d. Person who prepared this report		
Name Jennifer Brouillette	☐ Primary contact	
Title Environmental Scientist		
Company CK Associates		
Suite, mail drop, or division		
Street or P.O. Box 17170 Perkins Road		
City Baton Rouge	**State** LA	**Zip** 70810
Business phone 225-755-1000		
Email address jennifer.brouillette@c-ka.com		

e. Person to contact about Annual Maintenance Fees		☐ a ☐ b ☒ c ☐ d ☐ other (specify below)		
Name	☐ Primary contact	**Suite, mail drop, or division**		
Title		**Street or P.O. Box**		
Company		**City**	**State**	**Zip**
Business Phone		**Email Address**		

12. Proposed Project Emissions [LAC 33:III.517.D.3]

List the total emissions following the proposed project for this facility or process unit (for process unit-specific permits). Speciate all criteria pollutants, TAP, and HAP for the proposed project.

Pollutant	Proposed Emission Rate (tons/yr)
PM_{10}	0.50
$PM_{2.5}$	0.50
SO_2	0.43
NO_x	10.94
CO	2.41
VOC	417.99
2,2,4-Trimethylpentane	0.22
Benzene	2.48
Cumene	0.04
Ethylbenzene	0.26
n-Hexane	2.60
Toluene	1.36
Xylene	0.78

13. History of Permitted Emissions [LAC 33:III.517.D.18]

List each of the following in chronological order:

- The Permit Number and Date Action Issued for each air quality permit that has been issued to this facility or process unit (for process unit-specific permits) within the last ten (10) years.
- All small source exemptions, authorizations to construct, administrative amendments, case-by-case insignificant activities, and changes of tank service that have been approved since the currently effective Title V Operating Permit or State Operating Permit was issued to this facility or process unit (for process unit-specific permits). It is not necessary to list any such activities issued prior to the issuance of the currently effective Title V Operating Permit or State Operating Permit, if one exists.

Permit Number	Date Action Issued
1560-00027-03	6/12/2007
1560-00027-V0	5/2/2011
1560-00027-V1	7/30/2015

14.a. Enforcement Actions [LAC 33:III.517.D.18] - ☐ Yes ☒ No

If yes, list all federal and state air quality enforcement actions, settlement agreements, and consent decrees received for this facility and/or process unit (for process unit-specific permits) since the issuance of the currently effective Title V Operating Permit or State Operating Permit. For each action, list the type of action (or its tracking number), the regulatory authority or authorities that issued the action, and the date that the action was issued. Summarize the conditions imposed by the enforcement action, settlement agreement, and consent decree in Section 22, Table 2. It is not necessary to submit a copy of the referenced action. Add rows to table as necessary.

Type of Action or Tracking Number	Issuing Authority	Date Action Issued	Summary of Conditions Included?
			☐ Yes ☐ No
			☐ Yes ☐ No

14.b. Schedule for Compliance [LAC 33:III.517.E.4] ☐ Yes ☒ No

If the facility or process unit for which application is being made is not in full compliance with all applicable regulations, give a description of how compliance will be achieved, including a schedule for compliance below. Add rows as necessary. See instructions.

15. Letters of Approval for Alternate Methods of Compliance - ☐ Yes ☒ No

If yes, list all correspondence with LDEQ, EPA, or other regulatory bodies that provides for or supports a request for alternate methods of compliance with any applicable regulations for this facility or process unit (for process unit-specific permits). List the date of issuance of the letter and the regulation referenced by the letter. **Attach as an appendix a copy of all documents referenced in this table.** Letters that are not included may not be incorporated into a final permit. Add rows to table as necessary.

Date Letter Issued	Issuing Authority	Referenced Regulation(s)	Copy of Letter Attached?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

16. Initial Notifications and Performance Tests [LAC 33:III.517.D.18] - ☐ Yes ☒ No

If yes, list any initial notifications that have been submitted or one-time performance tests that have been performed for this facility or process unit (for process unit-specific permits) since the issuance of the currently effective Title V Operating Permit or State Operating Permit in order to satisfy regulatory requirements. Any initial notification or one-time performance test requirements that have not been satisfied should be listed in Section 22, Table 2 of this application. Any notifications or performance tests that recur periodically should also be properly noted in Section 22, Table 2 of this application. Add rows to table as necessary.

Initial Notification or One-time Performance Test?	Regulatory Citation Satisfied	Applicable Source(s)	Date Completed/Approved

17. Existing Prevention of Significant Deterioration or Nonattainment New Source Review Limitations [LAC 33:III.517.D.18]

Do one or more emissions sources represented in this permit application currently operate under one or more NSR permits?
☒ Yes ☐ No

If "yes," summarize the limitations from such permit(s) in the following table. Add rows to table as necessary. Be sure to note any annual emissions limitations from such permit(s) in Sections 12 and 13 of this application.

Permit Number	Date Issued	Emission Point ID No.	Pollutant	BACT/LAER Limit[1]	Averaging Period	Description of Control Technology/Work Practice Standards
PSD-LA-796	7/30/2015	TANK CAP	VOC	The VOC emissions estimate for the Crude Oil Storage Tank Cap (GRP0003), found in this PSD permit, is proposed to be modified. BACT is proposed the same for the tanks proposed in this application (EPNs 28-16, 29-16, 30-16, 31-16, 32-16) as the tanks listed in the PSD permit (EPNs 22-14, 23-14, 24-14, 25-14, 26-14, and 27-14). Normal operations: equip with an External Floating Roof. Landings: limit the duration of time that the roof is down. Cleanings: limit the duration of time between cessation of pumping out of product and commencing cleaning activities.		

[1]For example, lb/MM Btu, ppmvd @ 15% O_2, lb/ton, lb/hr

18. Air Quality Dispersion Modeling [LAC 33:III.517.D.15]

Was Air Quality Dispersion Modeling as required by LAC 33:III performed in support of this permit application? (Air Quality Dispersion Modeling is only required when applying for PSD permits and as requested by LDEQ.)
☐ Yes ☒ No

*Has Air Quality Dispersion Modeling completed in accordance with LAC 33:III ever been performed for this facility in support of a air permit application previously submitted for this facility or process unit (for process unit-specific permits) or as required by other regulations **AND** approved by LDEQ?*
☐ Yes ☒ No

If yes, enter the date the most recent Air Quality Dispersion Modeling results as required by LAC 33:III were submitted:

If the answer to either question above is "yes," enter a summary of the most recent results in the following table. If the answer to both questions is "no," enter "none" in the table. Add rows to table as necessary.

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Toxic Air Pollutant Ambient Air Standard or (National Ambient Air Quality Standard {NAAQS})

19. General Condition XVII Activities- ☒ Yes ☐ No

Enter all activities that qualify as Louisiana Air Emissions Permit General Condition XVII Activities.

- Expand this table as necessary to include all such activities.
- See instructions to determine what qualifies as a General Condition XVII Activity.
- Do not include emissions from General Condition XVII Activities in the proposed emissions totals for the permit application.

		Emission Rates – TPY					
Work Activity	Schedule	PM_{10}/ $PM_{2.5}$	SO_2	NO_x	CO	VOC	Other
Portable Thermal Oxidizer During Tank Cleaning	2 times/yr	0.06	0.005	0.79	0.67		

20. Insignificant Activities [LAC 33:III.501.B.5] - ☒ Yes ☐ No

Enter all activities that qualify as Insignificant Activities.

- Expand this table as necessary to include all such activities.
- For sources claimed to be insignificant based on size or emission rate (LAC 33:III.501.B.5.A), information must be supplied to verify each claim. This may include but is not limited to operating hours, volumes, and heat input ratings.
- If aggregate emissions from all similar pieces of equipment (i.e. all LAC 33:III.501.B.5.A.1 activities) claimed to be insignificant are greater than 5 tons per year for any pollutant, then the activities can not be claimed as insignificant and must be represented as permitted emission sources. Consult instructions.

Emission Point ID No.	Description	Physical/Operating Data	Citation
There are no proposed changes to the Insignificant Activities except to add one activity shown below.			
38-16	Day Tank for Standby Generator (Clovelly Dome)	94 gallons	LAC 33:III.501.B.5.A.2

21. Regulatory Applicability for Commonly Applicable Regulations – Answer all below [LAC 33:III.517.D.10]

Does this facility contain asbestos or asbestos containing materials? ☐ **Yes** ☒ **No**
If "yes," the facility or any portion thereof may be subject to 40 CFR 61, Subpart M, LAC 33:III.Chapter 27, and/or LAC 33:III.5151 and this application must address compliance as stated in Section 22 of this application

Is the facility or process unit represented in this permit subject to 40 CFR 68, or is any other process unit located at the same facility as the process unit represented in this application subject to 40 CFR 68? ☐ **Yes** ☒ **No**
If "yes," the entire facility is subject to 40 CFR 68 and LAC 33:III.Chapter 59 and this application must address compliance as stated in Section 22 of this application.

Is the facility listed in LAC 33:III.5611

Table 5 ☒ **Yes** ☐ **No**

Table 6 ☒ **Yes** ☐ **No**

Table 7 ☒ **Yes** ☐ **No**

Does the applicant own or operate commercial refrigeration equipment normally containing more than 50 pounds of refrigerant at this facility or process unit? ☐ **Yes** ☒ **No**
If "yes," the entire facility is subject to 40 CFR 82, Subpart F and this application must address compliance as stated in Section 22 of this application.

22. Applicable Regulations, Air Pollution Control Measures, Monitoring, and Recordkeeping

Important points for Table 1 [LAC 33:III.517.D.10]:

- List in Table 1, by Emission Point ID Number and Descriptive Name of the Equipment, state and federal pollution abatement programs and note the applicability or non-applicability of the regulations to each source.
- Adjust the headings for the columns in Table 1 as necessary to reflect all applicable regulations, in addition to any regulations that do not apply but need an applicability determination to verify this fact.
- For each piece of equipment, enter "1" for each regulation that applies. Enter "2" for each regulation that applies to this type of source, but from which this source of emissions is exempt. Enter "3" for equipment that is subject to a regulation, but does not have any applicable requirements. Also, enter "3" for each regulation that have applicable requirements that apply to the particular emission source but the regulations currently do not apply due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place.
- Leave the spaces blank when the regulations clearly would not apply under any circumstances to the source. For example, LAC 33:III.2103 – Storage of Volatile Organic Compounds would never apply to a steam generating boiler, no matter the circumstances.
- Consult instructions.

Important points for Table 2 [LAC 33:III.517.D.4; LAC 33:III.517.D.7; LAC 33:III.517.D.10]:

- For each piece of equipment listed in Table 2, include all applicable limitation, recordkeeping, reporting, monitoring, and testing requirements. Also include any one-time notification or one-time tests performance test requirements that have not been fulfilled.
- Each of these regulatory aspects (limitation, recordkeeping, reporting, etc.) should be addressed for each regulation that is applicable to each emissions source or emissions point.
- For each regulation that provides a choice regarding the method of compliance, indicate the method of compliance that will be employed. It is not sufficient to state that all compliance options will be employed, though multiple compliance options may be approved as alternative operating scenarios.
- Consult instructions.

Important points for Table 3 [LAC 33:III.517.D.16]:

- Each time a 2 or a 3 is used to describe applicability of a source in Table 1, an entry should be made in Table 3 that explains the exemption or non-applicability status of the regulation to that source.
- Fill in all requested information in the table.
- The exact regulatory citation that provides for the specific exemption or non-applicability determination should be entered into the Citation Providing for Exemption or Non-applicability column.
- Consult Instructions.

Important points for Table 4 [LAC 33:III.517.D.18]

- List any single emission source that routes its emissions to another point where these emissions are commingled with the emissions of other sources before being released to the atmosphere. Do not list any single emission source in this table that does not route its emissions in this manner.
- List any and all emission sources that are routed as described above. This includes emission sources that do not otherwise appear in this permit application.
- Consult instructions.

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Source		LAC 33:III.Chapter									LAC 33:III.				
ID No.:	Descriptive Name of the Source	5	9	11	13	15	29	51	56	59	2103	2111	2113	2115	2121
EQTTBD	28-16 Tank 6422 (Clovelly Dome)										1				
EQTTBD	29-16 Tank 6423 (Clovelly Dome)										1				
EQTTBD	30-16 Tank 6424 (Clovelly Dome)										1				
EQTTBD	31-16 Tank 6425 (Clovelly Dome)										1				
EQTTBD	32-16 Tank 6426 (Clovelly Dome)										1				
EQTTBD	1-16 Standby Generator (Clovelly Dome)			1	1										

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Source		40 CFR 60					40 CFR 61		40 CFR 63				40 CFR		
ID No.:	Descriptive Name of the Source	A	Ka	Kb	GG	IIII	A	FF	A	VV	ZZZZ	CCCCCC	64	68	82
EQTTBD	28-16 Tank 6422 (Clovelly Dome)	1		1											
EQTTBD	29-16 Tank 6423 (Clovelly Dome)	1		1											
EQTTBD	30-16 Tank 6424 (Clovelly Dome)	1		1											
EQTTBD	31-16 Tank 6425 (Clovelly Dome)	1		1											
EQTTBD	32-16 Tank 6426 (Clovelly Dome)	1		1											
EQTTBD	1-16 Standby Generator (Clovelly Dome)	1				1			1		1				

KEY:

1 The regulations have applicable requirements, which apply to this particular emission source. The emissions source may have an exemption from the control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.

2 The regulations have applicable requirements, which may apply to this particular emissions source, but the source is currently exempt from these requirements due to meeting a specific criteria, such as it has been constructed, modified, or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.

3 The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

TABLE 2: STATE AND FEDERAL REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/ Frequency	State Only Requirement
Crude Oil Storage Tanks (Clovelly Dome) EQTTBD, 28-16, Tank 6422 EQTTBD, 29-16, Tank 6423 EQTTBD, 30-16, Tank 6424 EQTTBD, 31-16, Tank 6425 EQTTBD, 32-16, Tank 6426	Chapter 21 - Control of Emission of Organic Compounds	**Requirements that limit emissions or operations -**			
		Equip with a submerged fill pipe.	LAC 33:III.2103.B		
		Seal closure devices required in LAC 33:III.2103D shall have no visible holes, tears, or other openings in the seals or seal fabric.	LAC 33:III.2103.D.2.a		
		Seal closure devices required in LAC 33:III.2103D shall be intact and uniformly in place around the circumference of the floating roof and the tank wall.	LAC 33:III.2103.D.2.b		
		Seal gap area <= 1 in^2/ft of tank diameter (6.5 cm2/0.3m), for gaps between the secondary seal and tank wall that exceed 1/8 inch (0.32 cm) in width.	LAC 33:III.2103.D.2.c	All year	
		Seal gap area <= 10 in^2/ft of tank diameter (65 cm2/0.3m), for gaps between the primary seal and tank wall that exceed 1/8 inch (0.32 cm) in width.	LAC 33:III.2103.D.2.d	All year	
		Initiate repairs of seals within seven working days of recognition of defective conditions by ordering appropriate parts, to avoid noncompliance with LAC 33:III.2103. Complete repairs within three months of the ordering of the repair parts.	LAC 33:III.2103.D.2.e		
		Provide all openings in the external floating roof (except for automatic bleeder vents, rim space vent, and leg sleeves) with a projection below the liquid surface. Equip each opening in the roof (except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves) with a cover, seal or lid that is to be maintained in a closed position at all times except when the device is in actual use. Keep automatic bleeder vents closed at all times except when the roof is being floated off the roof leg supports. Set rim vents to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Equip any emergency roof drain with a slotted membrane fabric cover or equivalent cover that covers at least 90% of the opening.	LAC 33:III.2103.D.3		
		Equip with an external floating roof consisting of a pontoon type roof, double deck type roof, or external floating cover which will rest or float on the surface of the liquid contents and is equipped with a primary closure seal to close the space between the roof edge and tank wall and a continuous secondary seal (a rim mounted secondary) extending from the floating roof to the tank wall.	LAC 33:III.2103.D		
		Determine compliance with LAC 33:III.2103.D.2 and 4 using the methods in LAC 33:III.2103.H.1.	LAC 33:III.2103.H.1		
		Determine VOC maximum true vapor pressure using the methods in LAC 33:III.2103.H.3.a-e.	LAC 33:III.2103.H.3		
		Requirements that specify monitoring -			
		Secondary Seal or closure mechanism monitored by visual inspection/determination semiannually.	LAC 33:III.2103.D.2.e	All year	
		Secondary seals: Seal gap area & width monitored by measurement annually at any tank level, provided the roof is off its legs.	LAC 33:III.2103.D.2.e	All year	
		Primary seals: Seal gap area & width monitored by measurement once every five years at any tank level, provided the roof is off its legs.	LAC 33:III.2103.D.2.e	All year	
		Requirements that specify records to be kept and record retention time -			
		Equipment/operational data recordkeeping by electronic or hard copy upon occurrence of event. Keep records of conditions that are not up to the standards described in LAC 33:III.2103.D.2 and the date(s) that the standards are not met. Notify the administrative authority within seven days of noncompliance with LAC 33:III.2103.D.2	LAC 33:III.2103.D.2.e		
		Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III.2103.I.1-7, as applicable.	LAC 33:III.2103.I		
		Requirements that specify reports to be submitted -			
		None			
		Requirements that specify performance testing -			
		None			

TABLE 2: STATE AND FEDERAL REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/ Frequency	State Only Requirement
Crude Oil Storage Tanks (Clovelly Dome) EQTTBD, 28-16, Tank 6422 EQTTBD, 29-16, Tank 6423 EQTTBD, 30-16, Tank 6424 EQTTBD, 31-16, Tank 6425 EQTTBD, 32-16, Tank 6426	40 CFR Part 60 NSPS Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	**Requirements that limit emissions or operations -**			
		Except for automatic bleeder vents and rim space vents, each opening in a non contact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, equip each opening in the roof with a gasketed cover, seal, or lid and maintain in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Close automatic bleeder vents at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Set rim vents to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting. Equip automatic bleeder vents and rim space vents with gaskets. Provide each emergency roof drain with a slotted membrane fabric cover that covers at least 90% of the area of the opening.	40 CFR 60.112b(a)(2)(ii)		
		Equip with an external floating roof consisting of a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Equip with a closure device between the wall of the storage vessel and the roof edge. The closure device consists of two seals, secondary above the primary. The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in 40 CFR 60.113b(b)(4), the primary seal shall completely cover the annular space between the edge of the floating roof and tank wall. The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in 40 CFR 60.113b(b)(4). The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except as during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.	40 CFR 60.112b(a)(2)		
		Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in 40 CFR 60.113b(b)(4).	40 CFR 60.113b(b)(3)		
		Seal gap area <= 212 cm^2/m of tank diameter (accumulated area) for gaps between the tank wall and the mechanical shoe seal or liquid-mounted primary seal.	40 CFR 60.113b(b)(4)(i)	All year	
		Seal gap width <= 3.81 cm for the width of any portion of any gap between the tank wall and the mechanical shoe seal or liquid-mounted primary seal.	40 CFR 60.113b(b)(4)(i)	All year	
		One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 centimeters above the stored liquid surface.	40 CFR 60.113b(b)(4)(i)(A)		
		There are to be no holes, tears, or other openings in the shoe, primary seal fabric, or seal envelope.	40 CFR 60.113b(b)(4)(i)(B)		
		Install the secondary seal above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in 40 CFR 60.113b(b)(2)(iii).	40 CFR 60.113b(b)(4)(ii)(A)		
		Seal gap area <= 21.2 cm^2/m of tank diameter (accumulated area) for gaps between the tank wall and the secondary seal.	40 CFR 60.113b(b)(4)(ii)(B)	All year	
		Seal gap width <= 1.27 cm for the width of any portion of any gap between the tank wall and the secondary seal.	40 CFR 60.113b(b)(4)(ii)(B)	All year	
		There are to be no holes, tears, or other openings in the secondary seal fabric, or seal fabric.	40 CFR 60.113b(b)(4)(ii)(C)		
		Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in 40 CFR 60.113b(b)(4)(i) and (ii) except as specified in 40 CFR 60.113b(b)(4)(iii).	40 CFR 60.113b(b)(4)		
		If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.	40 CFR 60.113b(b)(6)(i)		

TABLE 2: STATE AND FEDERAL REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/ Frequency	State Only Requirement
Crude Oil Storage Tanks (Clovelly Dome) EQTTBD, 28-16, Tank 6422 EQTTBD, 29-16, Tank 6423 EQTTBD, 30-16, Tank 6424 EQTTBD, 31-16, Tank 6425 EQTTBD, 32-16, Tank 6426	40 CFR Part 60 NSPS Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	**Requirements that specify monitoring -**			
		Tank roof and seals monitored by visual inspection/determination at the regulation's specified frequency. Inspect the external floating roof, the primary seal, the secondary seal, and fittings each time the storage vessel is emptied and degassed.	40 CFR 60.113b(b)(6)	All year	
		Requirements that specify records to be kept and record retention time -			
		Gap measurement(s) recordkeeping by electronic or hard copy upon each occurrence of gap measurement performance, as required by 40 CFR 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain the date of the measurement, the raw data obtained in the measurement, the calculation described in 40 CFR 60.113b(b)(2)and (b)(3). Keep copies of all records at least two years.	40 CFR 60.115b(b)(3)		
		Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. Keep copies of all records for the life of the source as specified by 40 CFR 60.116b(a).	40 CFR 60.116b(b)		
		VOL storage data recordkeeping by electronic or hard copy continuously. Records consist of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period. Keep copies of all records for at least two years.	40 CFR 60.116b(c)		
		Requirements that specify reports to be submitted -			
		Submit notification: Due at least 30 days in advance of any gap measurements required by 40 CFR 60.113b(b)(1)to afford DEQ the opportunity to have an observer present.	40 CFR 60.113b(b)(5)		
		Submit notification in writing: Due at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by 40 CFR 60.113b(6) to afford DEQ an opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph 40 CFR 60.113b(b)(6) is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, notify DEQ at least 7 days prior to the refilling of the storage vessel. Notify by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, submit notification in writing including the written documentation and send by express mail so that it is received by DEQ at least 7 days prior to the refilling.	40 CFR 60.113b(b)(6)(ii)		
		Submit a report to DEQ as an attachment to the notification required by 40 CFR 60.7(a)(3). This report shall describe the control equipment and certify that the control equipment meets the specifications of 40 CFR 60.112b(a)(2) and 60.113b(b)(2), (b)(3), and (b)(4). Keep copies of all reports for at least two years.	40 CFR 60.115b(b)(1)		
		Submit a report to DEQ within 60 days of performing the seal gap measurements required by 40 CFR 60.113b(b)(1). The report shall contain the date of measurement, the raw data obtained in the measurement, the calculations described in 40 CFR 60.113b(b)(2) and (b)(3). Keep copies of all reports for at least two years.	40 CFR 60.115b(b)(2)		
		Submit a report to DEQ within 30 days after each seal gap measurement detects gaps exceeding the limitations specified in 40 CFR 60.113b(b)(4). The report will identify the vessel and contain the information specified in 40 CFR 60.115b(b)(2) and the date the vessel was emptied or the repairs made and date of repair. Keep copies of all reports for at least two years.	40 CFR 60.115b(b)(4)		
		Submit notification: Due within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.	40 CFR 60.116b(d)		
		Requirements that specify performance testing -			
		None			

TABLE 2: STATE AND FEDERAL REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/ Frequency	State Only Requirement
1-16 Standby Generator (Clovelly Dome)	Chapter 11 - Control of Emissions of Smoke	**Requirements that limit emissions or operations -**			
		Emission of smoke generated by the burning of fuel or combustion of waste material in a combustion unit, including the incineration of industrial, commercial, institutional and municipal wastes, shall be controlled so that the shade or appearance of the emission is not darker than 20% average opacity, except that such emissions may have an average opacity in excess of 20% for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1101.B		
		Requirements that specify monitoring -			
		None			
		Requirements that specify records to be kept and record retention time -			
		None			
		Requirements that specify reports to be submitted -			
		None			
		Requirements that specify performance testing -			
		None			
	Chapter 13 - Emission Standards for PM	**Requirements that limit emissions or operations -**			
		Opacity <= 20%; except emissions may have an average opacity in excess of 20% for not more than one six-minute period in any 60 consecutive minutes.	LAC 33:III.1311.C		
		Requirements that specify monitoring -			
		None			
		Requirements that specify records to be kept and record retention time -			
		None			
		Requirements that specify reports to be submitted -			
		None			
		Requirements that specify performance testing -			
		None			
	NSPS Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	**Requirements that limit emissions or operations -**			
		Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in 60.4202 for all pollutants, for the same model year and maximum engine power for their 2007 model year and later stationary CI ICE.	40 CFR 60.4205(b)		
		Operate and maintain CI ICE in accordance with approved manufacturer specifications that comply with the applicable emission standards over the lifetime of the engine.	40 CFR 60.4206		
		Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirement of 40 CFR 80.510(b) for nonroad diesel fuel.	40 CFR 60.4207(b)		
		After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.	40 CFR 60.4208(a)		
		Engine must be equipped with a non-resettable hour meter prior to startup of the engine.	40 CFR 60.4209(a)		
		Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. You may only change those settings that are permitted by the manufacturer. You must meet the requirements of 40 CFR parts 89, 94, and/or 1068, as they apply to you.	40 CFR 60.4211(a)		

TABLE 2: STATE AND FEDERAL REQUIREMENTS
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Emission Point ID No.:	Applicable Requirement	Compliance Method/Provision	Compliance Citation	Averaging Period/ Frequency	State Only Requirement
1-16 Standby Generator (Clovelly Dome)	NSPS Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	**Requirements that limit emissions or operations -**			
		If you are an owner or operator of a 2007 model year and later CI internal combustion engine and must comply with the emission standards specified in 60.4205(b), you must comply by purchasing an engine certified to the emission standards in 60.4205(b), as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.	40 CFR 60.4211(c)		
		Requirements that specify monitoring -			
		None			
		Requirements that specify records to be kept and record retention time -			
		Operating time recordkeeping by electronic or hard copy upon occurrence of event. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record the time of operation of the engine and the reason the engine was in operation during that time.	40 CFR 60.4214(b)		
		Requirements that specify reports to be submitted -			
		None			
		Requirements that specify performance testing -			
		None			
	40 CFR Part 63 Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	**Requirements that limit emissions or operations -**			
		Comply with 40 CFR 63 Subpart ZZZZ by complying with 40 CFR 60 IIII.	40 CFR 63.6590(c)		
		Requirements that specify monitoring -			
		None			
		Requirements that specify records to be kept and record retention time -			
		None			
		Requirements that specify reports to be submitted -			
		None			
		Requirements that specify performance testing -			
		None			

TABLE 3: EXPLANATION FOR EXEMPTION STATUS OR NON-APPLICABILITY OF A SOURCE

LOOP, LLC - Port Complex

Lafourche Parish, Louisiana

Emission Point ID No.:	Requirement	Exempt or Does Not Apply	Explanation	Citation Providing for Exemption or Non-applicability
NA				

TABLE 4: EQUIPMENT LIST
LOOP, LLC - Port Complex
Lafourche Parish, Louisiana

Enter each single emission point that routes its emissions to another source (i.e., a control device) or a common stack, or is part of an Emissions Cap. List the emissions source to which each single emission point is routed or the Cap of which the source is a member, if applicable. Consult instructions.

Emission Point ID No:	Description	Construction Date	Routes to:	Operating Rate/Volume	Applicable Requirement(s)?
TBD	28-16 Tank 6422 (Clovelly Dome)		Tank CAP (GRP0003)	371,000 bbl	x Yes No
TBD	29-16 Tank 6423 (Clovelly Dome)		Tank CAP (GRP0003)	600,000 bbl	x Yes No
TBD	30-16 Tank 6424 (Clovelly Dome)		Tank CAP (GRP0003)	600,000 bbl	x Yes No
TBD	31-16 Tank 6425 (Clovelly Dome)		Tank CAP (GRP0003)	600,000 bbl	x Yes No
TBD	32-16 Tank 6426 (Clovelly Dome)		Tank CAP (GRP0003)	600,000 bbl	x Yes No

23. Emissions Inventory Questionnaire (EIQ) Forms [LAC 33:III.517.D.3; 517.D.6]

Complete one (1) EIQ for:

- Each emission source. If two emission sources have a common stack, the applicant may submit one EIQ sheet for the common emissions point. Note any emissions sources that route to this common point in Table 4 of the application.
- Each emissions CAP that is proposed. In general, this applies to each source that is part of the CAP.
- Each alternate operating scenario that a source may operate under. Some common scenarios are:
    1. Sources that combust multiple fuels
    2. Sources that have Startup/Shutdown max lb/hr emission rates higher than the max lb/hr for normal operating conditions would need an EIQ for the Startup/Shutdown emission rates for those sources
- Fugitive emissions releases. One (1) EIQ should be completed for each of the following types of fugitive emissions sources or emissions points:
    1. Equipment leaks.
    2. Non-equipment leaks (i.e. road dust, settling ponds, etc).

For each EIQ:

- Fill in all requested information.
- Speciate all Toxic Air Pollutants and Hazardous Air Pollutants emitted by the source.
- Use appropriate significant figures.
- Consult instructions.

The EIQ is in Microsoft Word Excel. Visit the following website to get to the EIQ form.
http://www.deq.louisiana.gov/portal/DIVISIONS/AirPermits/AirPermitApplications.aspx

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
TANK CAP	Crude Oil Storage Tank CAP (Clovelly Dome)	Method: 27,"Unknown" Datum: NAD27
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 766300 mE Vertical: 3263500 mN
GRP0003		Latitude: 29 ° 27 ' 45 " ____ hundredths
		Longitude: 90 ° 18 ' 20 " ____ hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft ____ ft^2	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr		25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

GRP0003, TANK CAP consists of point sources EQT0027 - EQT0038, EQT0040, EQT0042, EQT0043 in Title V Permit No. 1560-00027-V0.
The Clovelly Tank Facility Crude Oil Storage Tank Project added EQT0048 - EQT0053 to GRP0003, included in Title V Permit No. 1560-00027-V1.
This current application proposes to add five tanks to the initial project.
Note that this tank cap also includes filling and degassing/cleaning emissions.

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput		
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)		
Tank Diameter (ft)		

Tanks: Fixed Roof | Floating Roof | External | Internal

Date Engine Ordered | | | Engine Model Year | |

Date Engine Was Built by Manufacturer | | |

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation): TANK CAP Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current): Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)				93.88	-	411.19	430.75	C		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	0.05	-	0.22	0.22	U		ppm by vol
Benzene			00071-43-2	0.55	-	2.41	2.53	C		ppm by vol
Cumene			00098-82-8	0.01	-	0.03	0.03	U		ppm by vol
Ethyl benzene			00100-41-4	0.05	-	0.22	0.22	U		ppm by vol
n-Hexane			00110-54-3	0.58	-	2.55	2.68	C		ppm by vol
Toluene			00108-88-3	0.30	-	1.30	1.33	C		ppm by vol
Xylene (mixed isomers)			01330-20-7	0.16	-	0.69	0.67	C		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
28-16	Tank 6422 (Clovelly Dome)	Method 27,"Unknown" Datum NAD27
Tempo Subject Item ID No.		UTM Zone 15 Horizontal 765059 mE Vertical 3261562 mN
TBD 54		Latitude 29 ° 27 ' 19 " 77 hundredths
		Longitude 90 ° 16 ' 01 " 64 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft²	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	proposed	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

This tank is proposed to be built and as part of GRP0003, Crude Oil Storage Tank Cap (Clovelly Dome).

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	27,397 bbl/day	
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement	371,000 bbl	
Shell Height (ft)	50	
Tank Diameter (ft)	243	

Tanks: Fixed Roof | Floating Roof x | External | Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation): 28-16	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)				-	-	-	Capped	A		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	-	-	-	Capped	A		ppm by vol
Benzene			00071-43-2	-	-	-	Capped	A		ppm by vol
Cumene			00098-82-8	-	-	-	Capped	A		ppm by vol
Ethyl benzene			00100-41-4	-	-	-	Capped	A		ppm by vol
n-Hexane			00110-54-3	-	-	-	Capped	A		ppm by vol
Toluene			00108-88-3	-	-	-	Capped	A		ppm by vol
Xylene (mixed isomers)			01330-20-7	-	-	-	Capped	A		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
29-16	Tank 6423 (Clovelly Dome)	Method: 27,"Unknown" Datum: NAD27
Tempo Subject Item ID No.: TBD 55		UTM Zone: 15 Horizontal: 764678 mE Vertical: 3261707 mN
		Latitude: 29 ° 27 ' 24 " 76 hundredths
		Longitude: 90 ° 16 ' 15 " 63 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft²	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	proposed	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

This tank is proposed to be built and as part of GRP0003, Crude Oil Storage Tank Cap (Clovelly Dome).

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	27,397 bbl/day	
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement	600,000 bbl	
Shell Height (ft)	50	
Tank Diameter (ft)	310	

Tanks: Fixed Roof | Floating Roof x | External | Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation): 29-16 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)				-	-	-	Capped	A		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	-	-	-	Capped	A		ppm by vol
Benzene			00071-43-2	-	-	-	Capped	A		ppm by vol
Cumene			00098-82-8	-	-	-	Capped	A		ppm by vol
Ethyl benzene			00100-41-4	-	-	-	Capped	A		ppm by vol
n-Hexane			00110-54-3	-	-	-	Capped	A		ppm by vol
Toluene			00108-88-3	-	-	-	Capped	A		ppm by vol
Xylene (mixed isomers)			01330-20-7	-	-	-	Capped	A		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
30-16	Tank 6424 (Clovelly Dome)	Method: 27,"Unknown" Datum: NAD27
Tempo Subject Item ID No.		UTM Zone: 15 Horizontal: 764834 mE Vertical: 3261713 mN
TBD 56		Latitude: 29 ° 27 ' 24 " 85 hundredths
		Longitude: 90 ° 16 ' 09 " 84 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft^2	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	proposed	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

This tank is proposed to be built and as part of GRP0003, Crude Oil Storage Tank Cap (Clovelly Dome).

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	27,397 bbl/day	
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement	600,000 bbl	
Shell Height (ft)	50	
Tank Diameter (ft)	310	

Tanks: Fixed Roof | Floating Roof x | External | Internal

Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation) 30-16 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)				-	-	-	Capped	A		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	-	-	-	Capped	A		ppm by vol
Benzene			00071-43-2	-	-	-	Capped	A		ppm by vol
Cumene			00098-82-8	-	-	-	Capped	A		ppm by vol
Ethyl benzene			00100-41-4	-	-	-	Capped	A		ppm by vol
n-Hexane			00110-54-3	-	-	-	Capped	A		ppm by vol
Toluene			00108-88-3	-	-	-	Capped	A		ppm by vol
Xylene (mixed isomers)			01330-20-7	-	-	-	Capped	A		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
31-16	Tank 6425 (Clovelly Dome)	Method 27,"Unknown" Datum NAD27
Tempo Subject Item ID No.		UTM Zone 15 Horizontal 764671 mE Vertical 3261864 mN
TBD 57		Latitude 29 ° 27 ' 29 " 88 hundredths
		Longitude 90 ° 16 ' 15 " 77 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft²	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	proposed	25%	25%	25%	25%

Type of Fuel Used and Heat Input (see instructions)

Fuel		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

This tank is proposed to be built and as part of GRP0003, Crude Oil Storage Tank Cap (Clovelly Dome).

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	27,397 bbl/day	
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement	600,000 bbl	
Shell Height (ft)	50	
Tank Diameter (ft)	310	

Tanks: Fixed Roof | Floating Roof x | External | Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation) 31-16 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Permitted Emission Rate (Current) Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Total VOC (including those listed below)				-	-	-	Capped	A		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	-	-	-	Capped	A		ppm by vol
Benzene			00071-43-2	-	-	-	Capped	A		ppm by vol
Cumene			00098-82-8	-	-	-	Capped	A		ppm by vol
Ethyl benzene			00100-41-4	-	-	-	Capped	A		ppm by vol
n-Hexane			00110-54-3	-	-	-	Capped	A		ppm by vol
Toluene			00108-88-3	-	-	-	Capped	A		ppm by vol
Xylene (mixed isomers)			01330-20-7	-	-	-	Capped	A		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
32-16	Tank 6426 (Clovelly Dome)	Method 27,"Unknown" Datum NAD27
Tempo Subject Item ID No. TBD 58		UTM Zone 15 Horizontal 764827 mE Vertical 3261871 mN
		Latitude 29 ° 27 ' 29 " 97 hundredths
		Longitude 90 ° 16 ' 09 " 98 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	N/A ft / ft²	N/A ft	N/A ft/sec	N/A ft^3/min	N/A °F	8,760 hr/yr	proposed	25%	25%	25%	25%

Fuel	Type of Fuel Used and Heat Input (see instructions)		
		Type of Fuel	Heat Input (MMBTU/hr)
	a		
	b		
	c		

Notes

This tank is proposed to be built and as part of GRP0003, Crude Oil Storage Tank Cap (Clovelly Dome).

Operating Parameters (include units)	Parameter	Description
Normal Operating Rate/Throughput	27,397 bbl/day	
Maximum Operating Rate/Throughput		
Design Capacity/Volume/Cylinder Displacement	600,000 bbl	
Shell Height (ft)	50	
Tank Diameter (ft)	310	

Tanks: Fixed Roof | Floating Roof x | External | Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation) 32-16 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Total VOC (including those listed below)				-	-	-	Capped	A		ppm by vol
2,2,4-Trimethylpentane			00540-84-1	-	-	-	Capped	A		ppm by vol
Benzene			00071-43-2	-	-	-	Capped	A		ppm by vol
Cumene			00098-82-8	-	-	-	Capped	A		ppm by vol
Ethyl benzene			00100-41-4	-	-	-	Capped	A		ppm by vol
n-Hexane			00110-54-3	-	-	-	Capped	A		ppm by vol
Toluene			00108-88-3	-	-	-	Capped	A		ppm by vol
Xylene (mixed isomers)			01330-20-7	-	-	-	Capped	A		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
19-78	Portable Diesel Generator (Clovelly Dome)	Method 27,"Unknown" Datum NAD27
Tempo Subject Item ID No.		UTM Zone 15 Horizontal 766300 mE Vertical 3263500 mN
EQT 0013		Latitude 29 ° 28 ' 21 " 54 hundredths
		Longitude 90 ° 15 ' 13 " 93 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
no	0.33 ft / ft²	10 ft	2,478.67 ft/sec	212 ft^3/min	1,100 °F	100 hr/yr	constructed	25%	25%	25%	25%

Fuel — Type of Fuel Used and Heat Input (see instructions)

	Type of Fuel	Heat Input (MMBTU/hr)
a	Diesel	0.07
b		
c		

Notes

This source complies with the applicable requirements of NESHAP ZZZZ.

Operating Parameters (include units)

	Parameter	Description
Normal Operating Rate/Throughput	10 hp	
Maximum Operating Rate/Throughput	10 hp	
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)		
Tank Diameter (ft)		

Tanks: Fixed Roof | Floating Roof | External | Internal

Date Engine Ordered | Engine Model Year

Date Engine Was Built by Manufacturer

SI Engines: Rich Burn | Lean Burn | 2 Stroke | 4 Stroke

Emission Point ID No. (Designation): 19-78 / Pollutant	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates: Average (lb/hr)	Proposed Emission Rates: Maximum (lbs/hr)	Proposed Emission Rates: Annual (tons/yr)	Permitted Emission Rate (Current): Annual (tons/yr)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Particulate matter (PM_{10})				-	-	-	<0.01	D		gr/std ft^3
Particulate matter ($PM_{2.5}$)				-	-	-	<0.01	D		gr/std ft^3
Sulfur dioxide				-	-	-	<0.01	D		ppm by vol
Nitrogen oxides				-	-	-	0.02	D		ppm by vol
Carbon monoxide				-	-	-	<0.01	D		ppm by vol
Total VOC (including those listed below)				-	-	-	<0.01	D		ppm by vol

State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants

Date of submittal: Jun | 2016

Emission Point ID No. (Designation)	Descriptive Name of the Emissions Source (Alt. Name)	Approximate Location of Stack or Vent (see instructions)
1-16	Standby Generator (Clovelly Dome)	Method: 27,"Unknown" Datum: NAD27
Tempo Subject Item ID No.: EQTTBD 59		UTM Zone: 15 Horizontal: 764952 mE Vertical: 3261810 mN
		Latitude: 29 ° 27 ' 27 " 89 hundredths
		Longitude: 90 ° 16 ' 05 " 39 hundredths

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft^2)	Height of Stack Above Grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Conditions, not at Standard (ft^3/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point			
								Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
yes	0.67 ft / ft²	18 ft	161 ft/sec	6,759 ft^3/min	865 °F	100 hr/yr	proposed	25%	25%	25%	25%

Fuel		Type of Fuel Used and Heat Input (see instructions)	
		Type of Fuel	Heat Input (MMBTU/hr)
	a	Diesel	4.70
	b		
	c		

Notes

This source complies with the applicable requirements of NESHAP ZZZZ by complying with NSPS IIII.

Operating Parameters (include units)		
	Parameter	Description
Normal Operating Rate/Throughput	671 hp	
Maximum Operating Rate/Throughput	671 hp	
Design Capacity/Volume/Cylinder Displacement		
Shell Height (ft)		
Tank Diameter (ft)		

Tanks:	Fixed Roof	Floating Roof	External	Internal
Date Engine Ordered			Engine Model Year	
Date Engine Was Built by Manufacturer				

SI Engines:	Rich Burn	Lean Burn	2 Stroke	4 Stroke

Emission Point ID No. (Designation): 1-16	Control Equipment Code	Control Equipment Efficiency	HAP / TAP CAS Number	Proposed Emission Rates			Permitted Emission Rate (Current)	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration in Gases Exiting at Stack
Pollutant				Average (lb/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Annual (tons/yr)			
Particulate matter (PM_{10})				0.47	0.47	0.02	-	A		gr/std ft^3
Particulate matter ($PM_{2.5}$)				0.47	0.47	0.02	-	A		gr/std ft^3
Sulfur dioxide				0.27	0.27	0.01	-	A		ppm by vol
Nitrogen oxides				16.10	16.10	0.81	-	A		ppm by vol
Carbon monoxide				3.69	3.69	0.18	-	A		ppm by vol
Total VOC (including those listed below)				0.47	0.47	0.02	-	A		ppm by vol

24. NSR Applicability Summary [LAC 33:III.504 and LAC 33:III.509] ☒ N/A

This section consists of five tables, A-E, and is applicable only to new and existing major stationary sources (as defined in LAC 33:III.504 or in LAC 33:III.509) proposing to permit a physical change or change in the method of operation. It would also apply to existing minor stationary sources proposing a physical change or change in the method of operation where the change would be a major source in and of itself. Add rows to each table as necessary. Provide a written explanation of the information summarized in these tables. Consult instructions.

24.A. Project Summary

		A	B	C	D	E	F
Emission Point ID	Description	New, Modified, Affected, or Unaffected*	Pre-Project Allowables (TPY)	Baseline Actual Emissions (over 24-month period)	Projected Actual Emissions (TPY)	Post-Project Potential to Emit (TPY)	Change
$PM_{2.5}$	**24-Month Period:** MM/DD/YYYY – MM/DD/YYYY						
						$PM_{2.5}$ Change:	
PM_{10}	**24-Month Period:** MM/DD/YYYY – MM/DD/YYYY						
						PM_{10} Change:	
SO_2	**24-Month Period:** MM/DD/YYYY – MM/DD/YYYY						
						SO_2 Change:	
NO_X	**24-Month Period:** MM/DD/YYYY – MM/DD/YYYY						
						NO_X Change:	
CO	**24-Month Period:** MM/DD/YYYY – MM/DD/YYYY						
						CO Change:	

VOC	24-Month Period: MM/DD/YYYY – MM/DD/YYYY						
						VOC Change:	

CO_2e	24-Month Period: MM/DD/YYYY – MM/DD/YYYY						
						CO_2e Change:	

* Unaffected emissions units are not required to be listed individually. By choosing not to list unaffected emissions units, the applicant asserts that all emissions units not listed in Table 24.A will not be modified or experience an increase in actual annual emissions as part of the proposed project.

24.B. Creditable Contemporaneous Changes

Contemporaneous Period: MM/DD/YYYY – MM/DD/YYYY	

		A	B	C	D	E	F
Emission Point ID	Description	Date of Modification	Pre-Project Allowables (TPY)	Baseline Actual Emissions (over 24-month period)	24-Month Period	Post-Project Potential to Emit (TPY)	Change
$PM_{2.5}$							
						$PM_{2.5}$ Change:	
PM_{10}							
						PM_{10} Change:	
SO_2							
						SO_2 Change:	
NO_X							
						NO_X Change:	
CO							

24.B. Creditable Contemporaneous Changes

						CO Change:	

VOC							
						VOC Change:	

CO_2e							
						CO_2e Change:	

For each source identified as "New" or "Modified" in Section 24.A, complete the following table for each pollutant that will trigger NSR. If LAER is not required per LAC 33:III.504.D.3, indicate such.

24.C. BACT/LAER Summary

Emission Point ID	Pollutant	BACT/LAER	Limitation	Averaging Period	Description of Control Technology/Work Practice Standard(s)

24.D. PSD Air Quality Analyses Summary

		A	B	C	D	E	F	G	H	I
Pollutant	Averaging Period	Preliminary Screening Concentration ($\mu g/m^3$)	Level of Significant Impact ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Background ($\mu g/m^3$)	Maximum Modeled Concentration ($\mu g/m^3$)	Modeled + Background Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Modeled PSD Increment Consumption ($\mu g/m^3$)	Allowable Class II PSD Increment ($\mu g/m^3$)
$PM_{2.5}$	24-hour		1.2	4				35		-
	Annual		0.3	-				15		-
PM_{10}	24-hour		5	10				150		30
	Annual		1	-				50		17
SO_2	1-hour		7.8	-				195		-
	3-hour		25	-				1300		512
	24-hour		5	13				365		91
	Annual		1	-				80		20
NOx	1-hour		7.5	-				188		-
	Annual		1	14				100		25
CO	1-hour		2000	-				40,000	-	-
	8-hour		500	575				10,000	-	-
Lead	3-month		-	0.1				1.5	-	-

24.E Nonattainment New Source Review Offsets [LAC 33:III.517.D.16, LAC 33:III.504.D.4 & 5] ☒ **N/A**

Complete this section only if the proposed project triggers Nonattainment New Source Review (NNSR).

This project triggers NNSR review for: ☐ **NO_X** ☐ **VOC**

NO_X:

Is the applicant proposing to use internal offsets? ☐ **Yes** ☐ **No**

If not, identify the source of the offsets. **Company:** _____

Facility/Unit: _____

Permit No.: _____

Is an ERC Bank Application included with this application, or has an application already been submitted to LDEQ?
☐ **Yes** ☐ **No**

If the ERC application has already been submitted, give the date: _____

Identify the emissions units from which the offsets will be obtained (reference specific Emission Point ID numbers).

VOC:

Is the applicant proposing to use internal offsets? ☐ **Yes** ☐ **No**

If not, identify the source of the offsets. **Company:** _____

Facility/Unit: _____

Permit No.: _____

Is an ERC Bank Application included with this application, or has an application already been submitted to LDEQ?
☐ **Yes** ☐ **No**

If the ERC application has already been submitted, give the date: _____

Identify the emissions units from which the offsets will be obtained (reference specific Emission Point ID numbers).

In order to expedite processing, please be sure the ERC Bank Application is completed properly. In the case of NO_X, the document should clearly differentiate between ozone season and non-ozone season actual emissions during the baseline period. Regarding NO_X and VOC, be sure to indicate if a portion of the reductions are no longer surplus (e.g., due to new or revised federal or state regulations, use in a netting analysis, etc.).

24.F. Economic Impact

Answer the following questions.

How many temporary jobs will be added as a result of this project?

How many permanent jobs will be added as a result of this project?

24.G Notification of Federal Land Manager [LAC 33:III.504.E.1, LAC 33:III.509.P.1]
Complete this section only if the proposed project triggers NNSR or PSD.

a. Is the proposed facility or modification located within 100 kilometers of a Class I Area? ☐ **Yes** ☐ **No**
If Yes, determination of Q/d is not required; skip to the next question. If No, complete the Q/d equation below:

$$Q/d = \frac{PM_{10\,(NEI)} + SO_{2\,(NEI)} + NO_{X\,(NEI)} + H_2SO_{4\,(NEI)}}{\text{Class I km}}$$

where:
$PM_{10\,(NEI)}$ = net emissions increase of PM_{10}[1,2]
$SO_{2\,(NEI)}$ = net emissions increase of SO_2[1,2]
$NO_{X\,(NEI)}$ = net emissions increase of NO_X[1,2]
$H_2SO_{4\,(NEI)}$ = net emissions increase of H_2SO_4[1,2]
Class I km = distance to nearest Class I Area[3]

$$Q/d = \frac{\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_}{\_\_\_\_\_} = \_\_\_\_\_$$

If Q/d < 10, proceed to Section 25. If Q/d ≥ 10, complete the remainder of this Section.

b. Has the applicant provided a copy of the application to the Federal Land Manager? ☐ **Yes** ☐ **No**

c. Does the application contain modeling that demonstrates no adverse impact on Air Quality Related Values (AQRVs) in the Class I Area? ☐ **Yes** ☐ **No**

d. If Yes, indicate the model used: ☐ **VISCREEN** ☐ **PLUVUE II** ☐ **CALPUFF** ☐ **Other:**[4] _____

e. Has the Federal Land Manager concurred that the proposed project will not adversely impact any AQRVs?
☐ **Yes** ☐ **No** If Yes, please attach correspondence.

[1]If the net emissions increase of any pollutant is negative, enter "0."
[2]If the project did not trigger a netting analysis, use the project increase. In this case, the value will be less than the pollutant's significance level.
[3]In kilometers.
[4]Model must be approved by LDEQ and the Federal Land Manager.

25. Environmental Assessment Statement (EAS or "IT" Question Responses)

[La. R.S. 30:2018] ☐ Yes ☐ No

*** This section is required when applying for new Part 70 operating permits and/or major modifications. Any applications for these permit types that do not include answers to these questions will not be considered to be administratively complete. ***

For new Part 70 operating permits and/or major modifications, answers to these questions must be provided by the applicant to the local governmental authority and the designated public library at no additional costs to these entities. Consult instructions to determine what is considered to be a "local governmental authority" and a "designated public library". Indicate the name and address of the local governmental authority and the designated public library to which the answers to these questions were sent:

Name of Local Governing Authority			Name of Designated Public Library		
Street or P.O. Box			Street or P.O. Box		
City	State	ZIP	City	State	ZIP

Answer the following five questions on separate pages using full and complete answers. Include as many pages as necessary in order to provide full and complete answers. This information is required per Louisiana Revised Statutes 30:2018 (La. R.S. 30:2018).

Question 1: **Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?** (This question requires the permittee to identify adverse environmental effects, both potential and real.)

Question 2: **Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?** (This question requires the permittee to perform a cost-benefit analysis, or at least a quantitative indication of the economic benefits and a qualitative description of the negative impacts expected from the permittee's operation. The latter should come from the answer to Question 1.)

Question 3: **Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits?** (This question requires the permittee to demonstrate having considered alternate technologies.)

Question 4: **Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?** (This is the question that deals directly with siting criteria.)

Question 5: **Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?** (This question requires the permittee to demonstrate having considered the most stringent techniques for reducing or more efficiently handling waste.)

PART 70 OPERATING PERMIT APPLICATION COMPLETENESS CHECKLIST

Instructions: Complete this checklist and submit with the completed air permit application.

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517.A Timely Submittal	Was a Copy of the Application Also Submitted to EPA?		X		N/A
517.B.1,2 Certification	Does the Application include a Certification by a Responsible Official?	X			Section 10 of the AAEAP
517.B.3 Certification	Does the Application Include Certification by a Professional Engineer or their Designee:	X			Section 10 of the AAEAP
517.D.1 Identifying Information	Does the Application Include:				
	1. Company Name, Physical and Mailing Address of Facility?	X			Section 1 of Report Text and Section 11 of the AAEAP
	2. Map showing Location of the Facility?	X			Figure 1
	3. Owner and Operator Names and Agent?	X			Section 1 of the AAEAP
	4. Name and Telephone Number of Plant Manager or Contact?	X			Section 11 of the AAEAP
517.D.2 SIC Codes, Source Categories	Does the Application Include a Description of the Source's Processes and Products?	X			Section 1 of the Report Text
	Does the Application Include the Source's SIC Code?	X			Section 5 of the AAEAP
	Does the Application Include EPA Source Category of HAPs if applicable?			X	
517.D.3,6 EIQ Sheets	Has an EIQ Sheet been Completed for each Emission Point whether an Area or Point Source?	X			Section 23 of the AAEAP
517.D.4 Monitoring Devices	Does the Application Include Identification and Description of Compliance Monitoring Devices or Activities?	X			Section 22 of the AAEAP
517.D.5 Revisions and Modifications Only	For Revisions or Modifications, Does the Application include a Description of the Proposed Change and any Resulting Change in Emissions?	X			Section 1 of the Report Text
517.D.7 General Information	Does the Application Include Information Regarding Fuels, Fuel Use, Raw Materials, Production Rates, and Operating Schedules as necessary to substantiate emission rates?	X			Section 23 of the AAEAP

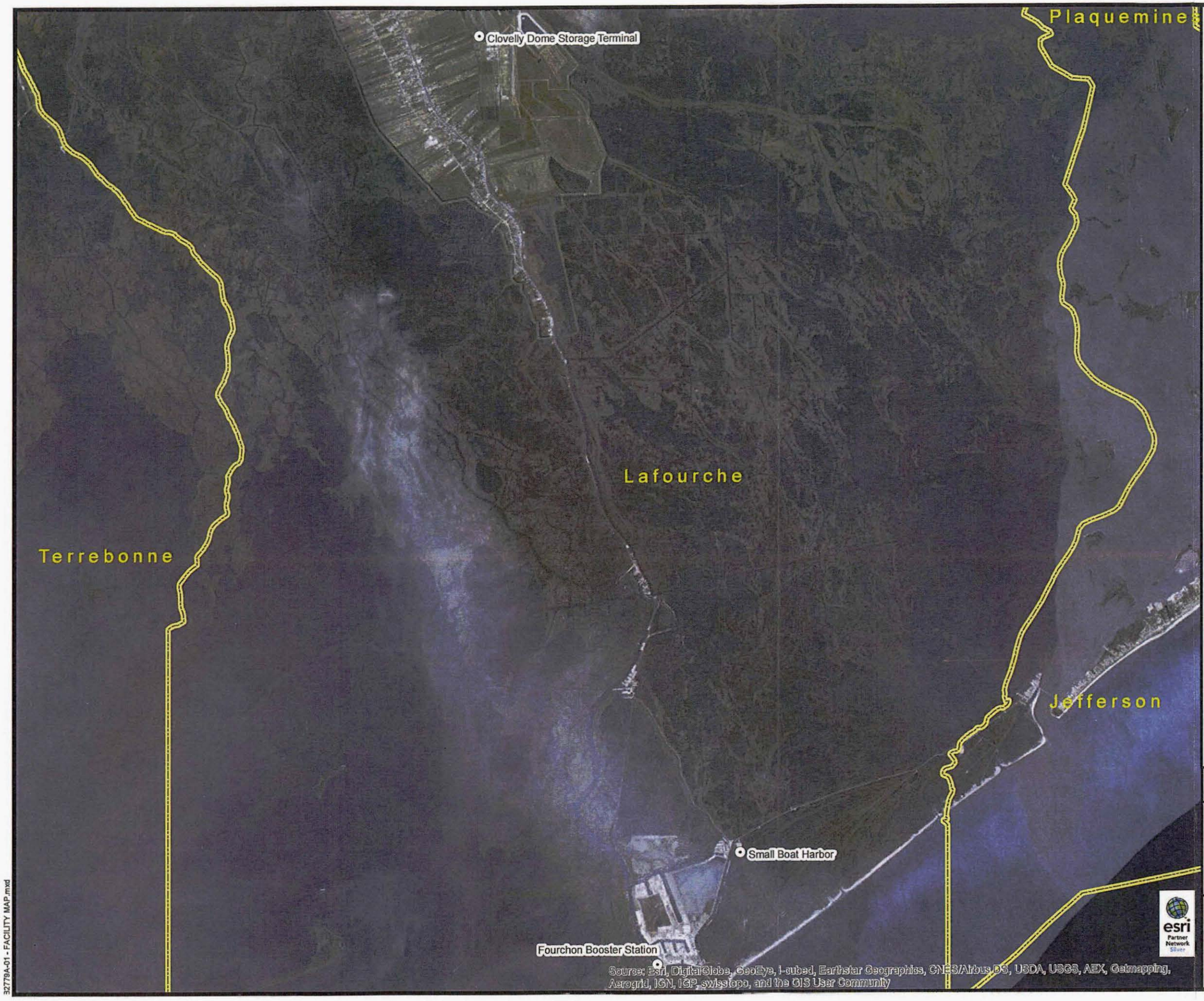
LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517 D.8 Operating Limitations	Has Information Regarding any Limitations on Source Operation or any Applicable Work Practice Standards been Identified?	X			Section 22 of the AAEAP
517.D.9 Calculations	Are Emission Calculations Provided?	X			Appendix A
517.D.10 Regulatory Review	Does the Application Include a Citation and Description of Applicable Louisiana and Federal Air Quality Requirements and Standards?	X			Section 22 of the AAEAP
517.D.11 Test Methods	Has a Description of or a Reference to Applicable Test Methods Used to Determine Compliance with Standards been Provided?	X			Section 22 of the AAEAP
517.D.12 Major Sources of TAPs	Does the Application include Information Regarding the Compliance History of Sources Owned or Operated by the Applicant (per LAC 33.III.5111)?			X	
517.D.13 Major Sources of TAPs	Does the Application include a Demonstration to show that the Source Meets all Applicable MACT and Ambient Air Standard Requirements?			X	
517.D.14 PSD Sources Only	If Required by DEQ, Does the Application Include Information Regarding the Ambient Air Impact for Criteria Pollutants as Required for the Source Impact Analysis per LAC 33:III.509.K, L, and M?			X	
517 D.15 PSD Sources Only	If Required by DEQ, Does the Application Include a Detailed Ambient Air Analysis?			X	
517.D.16, 18	Has any Additional Information been Provided?		X		
517.D.17 Fees	Has the Fee Code been Identified?	X			Section 5 of the AAEAP
	Is the Applicable Fee Included with the Application?	X			Attached
517.E.1 Additional Part 70 Requirements	Does the Certification Statement Include a Description of the Compliance Status of Each Emission Point in the Source with All Applicable Requirements?	X			Section 10 of the AAEAP
517E.2 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will continue to Comply with All Applicable Requirements with which the Source is in Compliance?	X			Section 10 of the AAEAP
517.E.3 Additional Part 70 Requirements	Does the Certification Statement Include a Statement that the Source will, on a timely basis, meet All Applicable Requirements that will Become Effective During the Permit Term?	X			Section 10 of the AAEAP

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
517.E.4 Additional Part 70 Requirements	Are there Applicable Requirements for which the Source is not in Compliance at the Time of Submittal?		X		
	Does the Application include a Compliance Plan Schedule?			X	
	Does the Schedule Include Milestone Dates for which Significant Actions will occur?			X	
	Does the Schedule Include Submittal Dates for Certified Progress Reports?			X	
517.E.5 Additional Part 70 Requirements Acid Rain	Is this Source Covered by the Federal Acid Rain Program?			X	
	Are the Requirements of LAC 33.III.517.E 1-4 included in the Acid Rain Portion of the Compliance Plan?			X	
517.E.6 Additional Part 70 Requirements	Have any Exemptions from any Applicable Requirements been Requested?	X			Section 22 of the AAEAP
	Is the List and explanations Provided?	X			Section 22 of the AAEAP
517.E.7 Additional Part 70 Requirements	Does the Application Include a Request for a Permit Shield?		X		
	Does the Request List those Federally Applicable Requirements for which the Shield is Requested along with the Corresponding Draft Permit Terms and conditions which are Proposed to Maintain Compliance?			X	
517.E.8 Additional Part 70 Requirements	Does the Application Identify and Reasonably Anticipated Alternative Operating Scenarios?			X	
	Does the Application include Sufficient Information to Develop permit Terms and Conditions for Each Scenario, Including Source Process and Emissions Data?			X	
517.F Confidentiality	Does the Application Include a Request for Non-Disclosure (Confidentiality)?			X	

LAC 33:III.	Completeness Questions Relative to the Part 70 Permit Application	Yes	No	NA	Location Within the Permit Application
525.B. Minor Permit Modifications	Does the Application Include a Listing of New Requirements Resulting for the Change?	X			Section 22 of the AAEAP
	Does the Application Include Certification by the Responsible Official that the Proposed Action Fits the Definition of a Minor Modification as per LAC 33:III.525.A.	X			Section 10 of the AAEAP
	Does the Certification also Request that Minor Modification Procedures be Used?	X			Section 4 of the AAEAP
	Does the Application, for Part 70 Sources, Include the Owner's Suggested Draft Permit and Completed Forms for the Permitting Authority to Use to Notify Affected States?		X		
La. R.S. 30:2018 – PSD/NNSR only	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the local governing authority at no cost to the local governing authority?		X		See Section 2.3 of the Report Text
	Has a copy of the answers to the questions posed in the Environmental Assessment Statement (Section 25) been sent to the designated public library at no cost to the designated public library?		X		See Section 2.3 of the Report Text

FIGURE 1

SITE LOCATION MAP



LAFOURCHE PARISH

0 10,000 20,000 30,000

Feet

Legend

- PARISH BOUNDARY
- FACILITY LOCATION

LOOP LLC
GALLIANO/LEEVILLE, LOUISIANA

TITLE V PERMIT MODIFICATION

SITE LOCATION MAP

LAFOURCHE PARISH

CK Associates Environmental Consultants

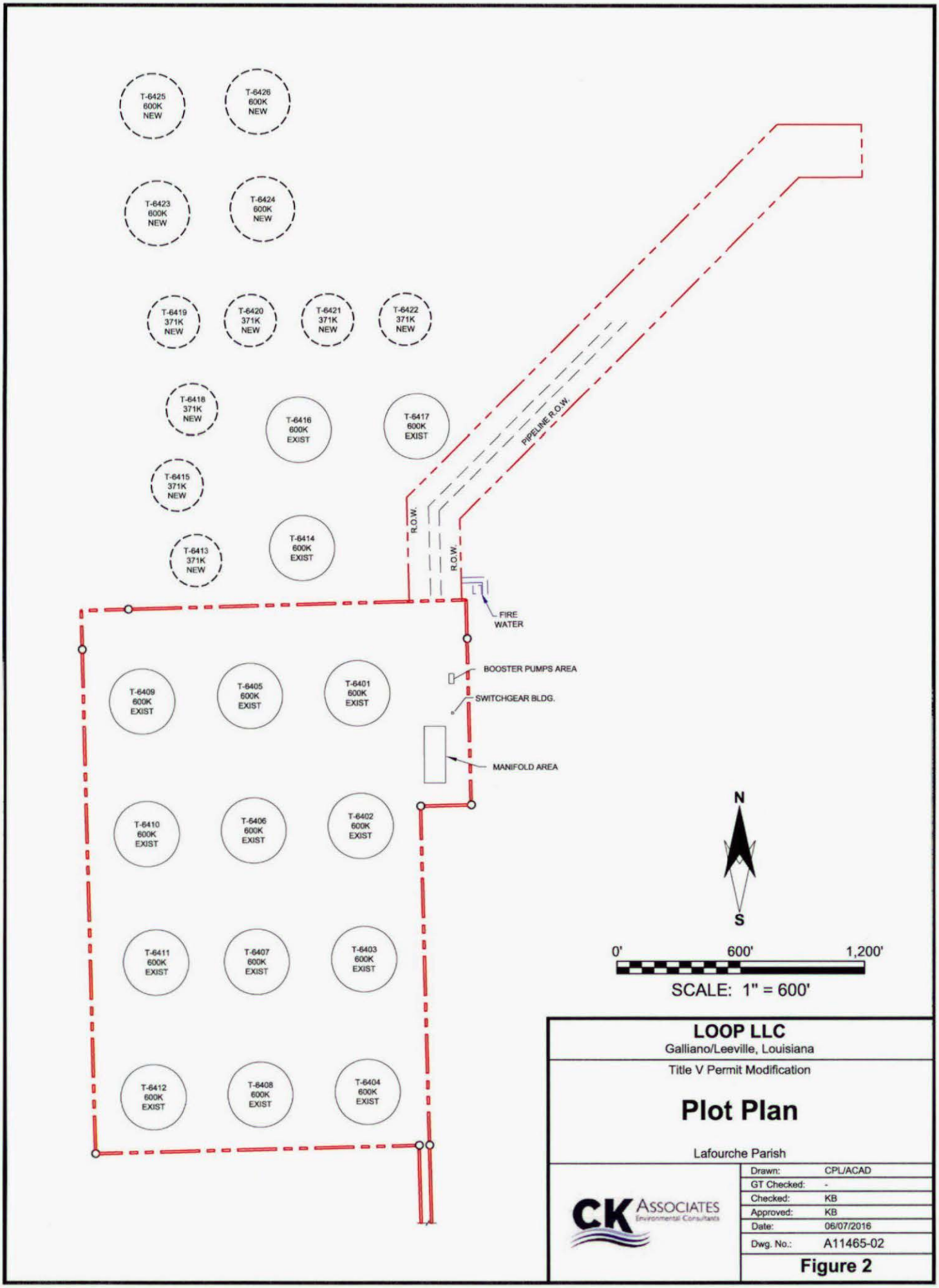
Drawn:	CPL/AM10.2.2
Checked:	JB
Approved:	JB
Date:	8/7/14
Dwg. No.:	B10475-01

FIGURE 1

32779A-01 - FACILITY MAP.mxd

FIGURE 2

PLOT PLAN



LOOP LLC
Galliano/Leeville, Louisiana

Title V Permit Modification

Plot Plan

Lafourche Parish

CK Associates Environmental Consultants

Drawn:	CPL/ACAD
GT Checked:	-
Checked:	KB
Approved:	KB
Date:	06/07/2016
Dwg. No.:	A11465-02

Figure 2

APPENDIX A

EMISSIONS CALCULATIONS

CRUDE OIL STORAGE TANK CAP (CLOVELLY DOME)

Crude Oil Storage Tank CAP
THEORETICAL OPERATING SCENARIO EMISSIONS SUMMARY

Clovelly Dome, Lafourche Parish, Louisiana
LOOP LLC

Tanks in Current Permit:			**Proposed Tanks:**		
Tank Throughput per Tank	*26,093*	*bbls/day*	*Tank Throughput per Tank*	*27,397*	*bbls/day*
Tank Throughput per Tank	*9.5*	*MMbbls/yr*	*Tank Throughput per Tank*	*10*	*MMbbls/yr*
Number of Tanks	*15*	*310-ft diameter*	*Number of Tanks*	*4*	*310-ft diameter*
Number of Tanks	*6*	*243-ft diameter*	*Number of Tanks*	*1*	*243-ft diameter*

Emission Summary for Tank CAP

Pollutant	Total Annual Emissions (tpy)	Average Hourly Emissions (lbs/hr)
TOTAL VOCs	411.19	93.88
2,2,4-Trimethylpentane	0.22	0.05
Benzene	2.41	0.55
Cumene (Isopropyl benzene)	0.03	0.01
Ethylbenzene	0.22	0.05
n-Hexane	2.55	0.58
Toluene	1.30	0.30
Xylenes	0.69	0.16

Emission Summary Per Currently Permitted 600,000 bbl Tank

Pollutant	Annual Throughput Per Tank (MMbbls)	Breathing Losses per tank (lb/yr)	Withdrawal Losses per tank (lb/yr)	Annual Operating Emissions (lbs/yr)	Landing Losses (lbs/event)	Landing Losses Events/yr	Degas/Clean Losses[1] (lbs/event)	Degas/Clean Losses Events/yr	Total Annual Emissions (tpy)
TOTAL VOCs	9.52	7,829.95	1,234.16	9,064.10	6,550.20	4	1,539	2	19.17
2,2,4-Trimethylpentane (Isooctane)				5.16	3.29		1.61		0.01
Benzene				53.11	38.24		18.68		0.12
Cumene (Isopropyl benzene)				1.58	0.289		0.15		0.002
Ethylbenzene				7.97	2.54		1.27		0.01
n-Hexane				54.04	41.08		19.99		0.13
Toluene				34.60	18.62		9.19		0.06
Xylenes				26.15	7.42		3.72		0.03
TOTAL TAP				182.62	111.47		54.60		0.37

[1] Note that Degas/Clean Losses shown here are a revision to the current permit (revised from one uncontrolled tank cleaning/yr to two controlled tank cleanings/yr).

Emission Summary Per Currently Permitted 371,000 bbl Tank

Pollutant	Annual Throughput Per Tank (MMbbls)	Breathing Losses per tank (lb/yr)	Withdrawal Losses per tank (lb/yr)	Annual Operating Emissions (lbs/yr)	Landing Losses (lbs/event)	Landing Losses Events/yr	Total Annual Emissions (tpy)
TOTAL VOCs	9.52	7,081.49	1,574.44	8,655.93	6,438.76	5	20.42
2,2,4-Trimethylpentane (Isooctane)				5.13	3.23		0.01
Benzene				50.79	37.59		0.12
Cumene (Isopropyl benzene)				1.89	0.28		0.002
Ethylbenzene				9.04	2.49		0.01
n-Hexane				50.71	40.38		0.13
Toluene				35.88	18.31		0.06
Xylenes				30.07	7.30		0.03
TOTAL TAP				183.49	109.57		0.37

Emission Summary Per Proposed 600,000 bbl Tank

Pollutant	Annual Throughput Per Tank (MMbbls)	Breathing Losses per tank (lb/yr)	Withdrawal Losses per tank (lb/yr)	Annual Operating Emissions (lbs/yr)	Total Annual Emissions (tpy)
TOTAL VOCs	10	7,829.95	1,295.86	9,125.81	4.56
2,2,4-Trimethylpentane (Isooctane)				5.22	0.003
Benzene				53.48	0.03
Cumene (Isopropyl benzene)				1.64	0.001
Ethylbenzene				8.22	0.004
n-Hexane				54.28	0.03
Toluene				35.22	0.02
Xylenes				27.01	0.01
TOTAL TAP				185.08	0.09

Emission Summary Per Proposed 371,000 bbl Tank

Pollutant	Annual Throughput Per Tank (MMbbls)	Breathing Losses per tank (lb/yr)	Withdrawal Losses per tank (lb/yr)	Annual Operating Emissions (lbs/yr)	Total Annual Emissions (tpy)
TOTAL VOCs	10	7,081.49	1,653.16	8,734.65	4.37
2,2,4-Trimethylpentane (Isooctane)				5.20	0.003
Benzene				51.26	0.03
Cumene (Isopropyl benzene)				1.97	0.001
Ethylbenzene				9.36	0.005
n-Hexane				51.02	0.03
Toluene				36.67	0.02
Xylenes				31.17	0.02
TOTAL TAP				186.64	0.09

NOTES:
Total VOCs are from an EPA TANKS 4.09d Program Emission Report.
The Clovelly Dome Storage Tanks store varied crude oil compositions to meet customer requirements.
Therefore, speciated emissions are per EPA TANKS 4.09d using Crude Oil RVP 8 to conservatively represent the stored products.

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Crude Oil Storage Tank 600,000 Proposed Tank
City:	Lafourche Parish
State:	Louisiana
Company:	LOOP LLC
Type of Tank:	External Floating Roof Tank
Description:	Crude Oil Storage Tank

Tank Dimensions

Diameter (ft):	310.00
Volume (gallons):	25,200,000.00
Turnovers:	16.67

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151
Roof Drain (3-in. Diameter)/90% Closed	6

Meterological Data used in Emissions Calculations: New Orleans, Louisiana (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Crude Oil Storage Tank 600,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil RVP 8	All	69.99	64.84	75.14	68.06	6.5139	N/A	N/A	50.0000			207.00	Option 4: RVP=8
1,2,4-Trimethylbenzene						0.0302	N/A	N/A	120.1900	0.0033	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.7891	N/A	N/A	114.2300	0.0010	0.0005	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.5308	N/A	N/A	78.1100	0.0060	0.0058	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.5780	N/A	N/A	84.1600	0.0070	0.0070	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1524	N/A	N/A	106.1700	0.0040	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.4667	N/A	N/A	86.1700	0.0040	0.0063	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0693	N/A	N/A	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						0.4474	N/A	N/A	92.1300	0.0100	0.0028	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						7.2120	N/A	N/A	49.4912	0.9497	0.9759	220.76	
Xylene (-m)						0.1273	N/A	N/A	106.1700	0.0140	0.0011	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Crude Oil Storage Tank 600,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

Annual Emission Calcaulations	
Rim Seal Losses (lb):	3,463.0095
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	8.1500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.1447
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.5139
Tank Diameter (ft):	310.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,295.8645
Annual Net Throughput (gal/yr.):	420,000,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	310.0000
Roof Fitting Losses (lb):	4,366.9368
Value of Vapor Pressure Function:	0.1447
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	1,508.9409
Average Wind Speed (mph):	8.1500
Total Losses (lb):	9,125.8109

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4	1.60	0.00	0.00	18.5219
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	8.1033
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6	6.20	1.20	0.94	214.7406
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2	25.00	13.00	2.20	3,613.9909
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	1.6736
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38	1.30	0.08	0.65	170.2519
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151	0.53	0.11	0.13	291.8921
Roof Drain (3-in. Diameter)/90% Closed	6	1.80	0.14	1.10	47.7625

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Crude Oil Storage Tank 600,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil RVP 8	3,463.01	1,295.86	4,366.94	0.00	9,125.81
Hexane (-n)	21.72	5.18	27.38	0.00	54.28
2,2,4-Trimethylpentane (isooctane)	1.74	1.30	2.19	0.00	5.22
Benzene	20.22	7.78	25.49	0.00	53.48
1,2,4-Trimethylbenzene	0.22	4.28	0.28	0.00	4.77
Cyclohexane	24.31	9.07	30.66	0.00	64.04
Ethylbenzene	1.34	5.18	1.69	0.00	8.22
Isopropyl benzene	0.15	1.30	0.19	0.00	1.64
Xylene (-m)	3.92	18.14	4.95	0.00	27.01
Toluene	9.85	12.96	12.42	0.00	35.22
Unidentified Components	3,379.54	1,230.68	4,261.69	0.00	8,871.91

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Crude Oil Storage Tank 371,000 Proposed Tank
City:	Lafourche Parish
State:	Louisiana
Company:	LOOP LLC
Type of Tank:	External Floating Roof Tank
Description:	Crude Oil Storage Tank

Tank Dimensions

Diameter (ft):	243.00
Volume (gallons):	15,582,000.00
Turnovers:	26.95

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151
Roof Drain (3-in. Diameter)/90% Closed	6

Meterological Data used in Emissions Calculations: New Orleans, Louisiana (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Crude Oil Storage Tank 371,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil RVP 8	All	69.99	64.84	75.14	68.06	6.5139	N/A	N/A	50.0000			207.00	Option 4: RVP=8
1,2,4-Trimethylbenzene						0.0302	N/A	N/A	120.1900	0.0033	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.7891	N/A	N/A	114.2300	0.0010	0.0005	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.5308	N/A	N/A	78.1100	0.0060	0.0058	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.5780	N/A	N/A	84.1600	0.0070	0.0070	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1524	N/A	N/A	106.1700	0.0040	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.4667	N/A	N/A	86.1700	0.0040	0.0063	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0693	N/A	N/A	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						0.4474	N/A	N/A	92.1300	0.0100	0.0028	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						7.2120	N/A	N/A	49.4912	0.9497	0.9759	220.76	
Xylene (-m)						0.1273	N/A	N/A	106.1700	0.0140	0.0011	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Crude Oil Storage Tank 371,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

Annual Emission Calcaulations	
Rim Seal Losses (lb):	2,714.5526
Seal Factor A (lb-mole/ft-yr):	0.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.4000
Average Wind Speed (mph):	8.1500
Seal-related Wind Speed Exponent:	1.0000
Value of Vapor Pressure Function:	0.1447
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	6.5139
Tank Diameter (ft):	243.0000
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Withdrawal Losses (lb):	1,653.1605
Annual Net Throughput (gal/yr.):	420,000,000.0000
Shell Clingage Factor (bbl/1000 sqft):	0.0060
Average Organic Liquid Density (lb/gal):	7.1000
Tank Diameter (ft):	243.0000
Roof Fitting Losses (lb):	4,366.9368
Value of Vapor Pressure Function:	0.1447
Vapor Molecular Weight (lb/lb-mole):	50.0000
Product Factor:	0.4000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	1,508.9409
Average Wind Speed (mph):	8.1500
Total Losses (lb):	8,734.6499

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4	1.60	0.00	0.00	18.5219
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	8.1033
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6	6.20	1.20	0.94	214.7406
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2	25.00	13.00	2.20	3,613.9909
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	1.6736
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38	1.30	0.08	0.65	170.2519
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151	0.53	0.11	0.13	291.8921
Roof Drain (3-in. Diameter)/90% Closed	6	1.80	0.14	1.10	47.7625

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Crude Oil Storage Tank 371,000 Proposed Tank - External Floating Roof Tank
Lafourche Parish, Louisiana

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil RVP 8	2,714.55	1,653.16	4,366.94	0.00	8,734.65
Hexane (-n)	17.02	6.61	27.38	0.00	51.02
2,2,4-Trimethylpentane (isooctane)	1.36	1.65	2.19	0.00	5.20
Benzene	15.85	9.92	25.49	0.00	51.26
1,2,4-Trimethylbenzene	0.17	5.46	0.28	0.00	5.90
Cyclohexane	19.06	11.57	30.66	0.00	61.29
Ethylbenzene	1.05	6.61	1.69	0.00	9.36
Isopropyl benzene	0.12	1.65	0.19	0.00	1.97
Xylene (-m)	3.08	23.14	4.95	0.00	31.17
Toluene	7.72	16.53	12.42	0.00	36.67
Unidentified Components	2,649.13	1,570.01	4,261.69	0.00	8,480.82

STORAGE TANK LANDING LOSSES

LOOP LLC

Assumptions:

Loss from Emptying and Refilling EFR, Partial Liquid Heel Tanks

Description	Quantity	Unit	Basis
n_d = number of days roof is landed	1	day	Minimum Basis for Reference Methodology
Mv = Vapor Molecular Weight	50.00	lb/lb-mole	TANKS 4.0.9d Default
RVP = Reid Vapor Pressure	8.00	psia	TANKS 4.0.9d Default
W_L = Liquid Density	7.10	lb/gal	TANKS 4.0.9d Default
H_L = Height of Liquid Heel	0.50	ft	Conservative Estimate
Pa = Atmospheric Pressure	14.70	psia	Standard Atmospheric Pressure
R = Ideal Gas Constant	10.73	psia-ft^3 per lb-mole°R	

Site Specific Data:

Description	Quantity	Unit	Basis
T_{max} = Daily Maximum Ambient Temperature	537.70	°R, Annual Average for New Orleans, Louisiana	7.1, Table 7.1-7
T_{min} = Daily Minimum Ambient Temperature	518.70	°R, Annual Average for New Orleans, Louisiana	7.1, Table 7.1-7
a = Tank Paint Solar Absorbance	0.17	White Paint Color	7.1, Table 7.1-6
I = Insolation	1437	Btu/ft^{2}d, Annual Average New Orleans, Louisiana	7.1, Table 7.1-7

Given:

Description	Quantity	Unit
D = Tank Diameter	310.00	ft
Hr = Roof Leg Setting	3.00	ft

Other Calculated Parameters:

Description	Quantity	Unit, [Formula]	Basis
A = Constant in Vapor Pressure Equation	10.81	dimensionless, [A = 12.82-0.9672*ln(RVP)]	7.1, Figure 7.1-16
B = Constant in Vapor Pressure Equation	4732.40	°R, [B = 7261-1216*ln(RVP)]	7.1, Figure 7.1-16
P= True Vapor Pressure	6.57	psia, [P = EXP(A-(B/T_{LA}))]	7.1, Equation 1-12a
P*= Vapor Pressure Function	0.15	dimensionless, [P/Pa/(1+(1-(P/Pa))$^{0.5}$)^2]	Equation 12, API Document
T_{avg} = Daily Average Ambient Temperature	528.20	°R, [T_{avg}=(T_{max}+T_{min})/2]	7.1, Equation 1-14
deltaT$_V$ = Daily Vapor Temperature Range	20.52	°R, [0.72(T_{max} - T_{min}) + 0.028al]	Equation 7, API Document
T_{LA} = Daily Average Liquid Surface Temperature	530.14	°R, [0.44T_{avg} + 0.56T_B + 0.0079al]	7.1, Equation 1-13
T_B = Liquid Bulk Temperature	528.22	°R, [T_B=T_{avg}+6*a-1]	7.1, Equation 1-15
h_v = Height of Vapor Space	2.50	ft, [height of deck above tank bottom - height of liquid heel]	Equation 25, API Document
K_S = Standing Idle Saturation Factor	0.53	dimensionless, [1/1 + 0.053(Ph_v)]	Equation 8, API Document
K_E = Vapor Space Expansion Factor	0.18	dimensionless, [deltaT$_V$/T_{avg}(1+0.5BP/T_{avg}(Pa-P)]	Equation 6, API Document
A_f = Floor Area	75,477	ft^2, [A_f = π *(D/2)^2]	
V_V = Vapor Volume	188,692	ft^3, [V_V = A_f*h_v]	7.1, Equation 2-32
C_{sf} = Filling Saturation Correction Factor	0.96	dimensionless	Equation 23, API document

STORAGE TANK LANDING LOSSES

LOOP LLC

LANDING LOSS EMISSIONS PER EVENT:

	Quantity	Unit, Formula	Basis
S = Filling Saturation Factor	**0.5**	dimensionless	Partial Liquid Heel
L_S = Standing Idle Loss	**1,298**	lb, $[L_S = 0.57 n_d D(P^*)M_V]$	Equation 14 & 10, API Document
L_F = Refilling Loss	**5,252**	lb, $[L_F = (PV_V/RT_{avg})M_V(C_{sf}S)]$	Equation 21, API Document
L_T = Total Roof Landing and Refilling Loss	**6,550**	lb, $[L_T = L_S+L_F]$	Equation 1, API Document

SPECIATION (TANKS 4.09d Crude Oil RVP 8)		Vapor Mass Fraction	EMISSIONS (lb)
Benzene		0.0058	38.24
Cumene (Isopropyl benzene)		0.0000	0.289
Ethylbenzene		0.0004	2.54
n-Hexane		0.0063	41.08
Toluene		0.0028	18.62
Xylenes		0.0011	7.42
Iso-octane		0.0005	3.29
	TOTAL TAP	**0.0170**	**111.47**
1,2,4-Trimethylbenzene		0.0001	0.415
Cyclohexane		0.0070	45.99
Unspeciated VOCs		0.9759	6392.32
	TOTAL VOC	1.0000	**6550.20**

REFERENCES:

AP-42 Section 7.1, Organic Liquid Storage Tanks, November 2006

Evaporative Loss from Storage Tank Floating Roof Landings, Technical Report 2567, American Petroleum Institute, April 2005

STORAGE TANK LANDING LOSSES

LOOP LLC

Assumptions:

Loss from Emptying and Refilling EFR, Partial Liquid Heel Tanks

Description	Quantity	Unit	Basis
n_d = number of days roof is landed	1	day	Minimum Basis for Reference Methodology
Mv = Vapor Molecular Weight	50.00	lb/lb-mole	TANKS 4.0.9d Default
RVP = Reid Vapor Pressure	8.00	psia	TANKS 4.0.9d Default
W_L = Liquid Density	7.10	lb/gal	TANKS 4.0.9d Default
H_L = Height of Liquid Heel	0.50	ft	Conservative Estimate
Pa = Atmospheric Pressure	14.70	psia	Standard Atmospheric Pressure
R = Ideal Gas Constant	10.73	psia-ft^3 per lb-mole°R	

Site Specific Data:

Description	Quantity	Unit	Basis
T_{max} = Daily Maximum Ambient Temperature	537.70	°R, Annual Average for New Orleans, Louisiana	7.1, Table 7.1-7
T_{min} = Daily Minimum Ambient Temperature	518.70	°R, Annual Average for New Orleans, Louisiana	7.1, Table 7.1-7
a = Tank Paint Solar Absorbance	0.17	White Paint Color	7.1, Table 7.1-6
I = Insolation	1437	Btu/ft^{2}d, Annual Average New Orleans, Louisiana	7.1, Table 7.1-7

Given:

Description	Quantity	Unit
D = Tank Diameter	243.00	ft
Hr = Roof Leg Setting	4.67	ft

Other Calculated Parameters:

Description	Quantity	Unit, [Formula]	Basis
A = Constant in Vapor Pressure Equation	10.81	dimensionless, [A = 12.82-0.9672*ln(RVP)]	7.1, Figure 7.1-16
B = Constant in Vapor Pressure Equation	4732.40	°R, [B = 7261-1216*ln(RVP)]	7.1, Figure 7.1-16
P= True Vapor Pressure	6.57	psia, [$P = EXP(A-(B/T_{LA}))$]	7.1, Equation 1-12a
P*= Vapor Pressure Function	0.15	dimensionless, [$P/Pa/(1+(1-(P/Pa))^{0.5})^2$]	Equation 12, API Document
T_{avg} = Daily Average Ambient Temperature	528.20	°R, [$T_{avg}=(T_{max}+T_{min})/2$]	7.1, Equation 1-14
deltaT$_V$ = Daily Vapor Temperature Range	20.52	°R, [$0.72(T_{max} - T_{min}) + 0.028al$]	Equation 7, API Document
T_{LA} = Daily Average Liquid Surface Temperature	530.14	°R, [$0.44T_{avg} + 0.56T_B + 0.0079al$]	7.1, Equation 1-13
T_B = Liquid Bulk Temperature	528.22	°R, [$T_B=T_{avg}+6*a-1$]	7.1, Equation 1-15
h_v = Height of Vapor Space	4.17	ft, [height of deck above tank bottom - height of liquid heel]	Equation 25, API Document
K_S = Standing Idle Saturation Factor	0.41	dimensionless, [$1/1 + 0.053(Ph_v)$]	Equation 8, API Document
K_E = Vapor Space Expansion Factor	0.18	dimensionless, [$deltaT_V/T_{avg}(1+0.5BP/T_{avg}(Pa-P)$]	Equation 6, API Document
A_f = Floor Area	46,377	ft^2, [$A_f = \pi *(D/2)^2$]	
V_V = Vapor Volume	193,237	ft^3, [$V_V = A_f*h_v$]	7.1, Equation 2-32
C_{sf} = Filling Saturation Correction Factor	0.97	dimensionless	Equation 23, API document

STORAGE TANK LANDING LOSSES

LOOP LLC

LANDING LOSS EMISSIONS PER EVENT:

	Quantity	Unit, Formula	Basis
S = Filling Saturation Factor	**0.5**	dimensionless	Partial Liquid Heel
L_S = Standing Idle Loss	**1,017**	lb, $[L_S = 0.57 n_d D(P^*)M_V]$	Equation 14 & 10, API Document
L_F = Refilling Loss	**5,421**	lb, $[L_F = (PV_V/RT_{avg})M_V(C_{sf}S)]$	Equation 21, API Document
L_T = Total Roof Landing and Refilling Loss	**6,439**	lb, $[L_T = L_S+L_F]$	Equation 1, API Document

SPECIATION (TANKS 4.09d Crude Oil RVP 8)		Vapor Mass Fraction	EMISSIONS (lb)
Benzene		0.0058	37.59
Cumene (Isopropyl benzene)		0.0000	0.284
Ethylbenzene		0.0004	2.49
n-Hexane		0.0063	40.38
Toluene		0.0028	18.31
Xylenes		0.0011	7.30
Iso-octane		0.0005	3.23
	TOTAL TAP	**0.0170**	**109.57**
1,2,4-Trimethylbenzene		0.0001	0.408
Cyclohexane		0.0070	45.20
Unspeciated VOCs		0.9759	6283.58
	TOTAL VOC	1.0000	**6438.76**

REFERENCES:

AP-42 Section 7.1, Organic Liquid Storage Tanks, November 2006

Evaporative Loss from Storage Tank Floating Roof Landings, Technical Report 2567, American Petroleum Institute, April 2005

STORAGE TANK CLEANING LOSSES
LOOP LLC

Source Description: Storage Tank Degassing & Cleaning

At a designated frequency, LOOP is required to empty, degas, and clean the storage tanks at the facility. This calculation estimates the emissions from this activity.

Method of Estimating Emissions:
http://www.epa.gov/ttnchie1/faq/tanksfaq.html#13

HOW CAN I ESTIMATE EMISSIONS FROM DEGASSING AND CLEANING OPERATIONS DURING A TANK TURNAROUND?

The following procedure can be used to approximate emissions from each step of the operation:

Emptying (degassing)
1. For a fixed roof tank, calculate emissions from one turnover with the turnover factor (Kn) = 1 to account for vapors displaced during filling and then add the emissions from 1 turnover calculated as if the tank had a floating roof to account for clingage.
2. For a floating roof tank, calculate emissions for one turnover then add the emissions from the tank assuming it has a fixed roof with a height equal to the height of the legs (about 6 or 7 ft.) to approximate the vapor displaced from the space under the floating roof.

Cleaning (sludge handling)
Most wet sludges are about 80% to 90% liquid by weight. A conservative approach for estimating emissions is to assume the sludge is 80% liquid. The remainder is assumed to be VOC and emitted. As an alternative, the actual sludge moisture content can be determined.

Given:

Tank Type: external floating roof (EFR) tank
Tank Diameter (feet): 310

Assumptions:
There will be only two EFR tanks cleaned per year.
Worst case is a 310' diameter tank with 1 inch of product remaining.
Landed roof leg height is 6.5 feet.
Month of landing is July for worst case temperatures.
Assuming wet sludge is 85% liquid by weight.
Vapor combustor with 98% control efficiency for VOCs.

Emptying (degassing)

Losses from TANKS 4.09d for a 310' diameter tank, one turnover:

Pollutant	Annual (lb/yr)[1]	Average (lb/hr)	Annual (tpy)
VOC	94.69	0.01	0.05
2,2,4-Trimethylpentane	0.09	0.00001	0.00004
Benzene	0.57	0.0001	0.0003
Cumene	0.08	0.00001	0.00004
Ethylbenzene	0.32	0.00004	0.0002
n-Hexane	0.42	0.00005	0.0002
Toluene	0.83	0.0001	0.0004
Xylenes	1.11	0.0001	0.001

[1] Emissions are the sum of working losses and one day of standing losses.

Losses from TANKS 4.09d for a 310' diameter tank with a roof landed height of 6.5 feet:

Pollutant	Annual (lb/yr)	Average (lb/hr)	Annual (tpy)
VOC	23,818.34	2.72	11.91
2,2,4-Trimethylpentane	13.57	0.002	0.01
Benzene	156.90	0.02	0.08
Cumene	1.26	0.0001	0.001
Ethylbenzene	10.88	0.001	0.01
n-Hexane	166.79	0.02	0.08
Toluene	78.04	0.01	0.04
Xylenes	31.88	0.004	0.02

$(0.05 + 11.91 + 26.51) \times 2 = 76.94$ tons (uncontrolled)

Cleaning (sludge handling)

Diameter (feet):	310
Radius (feet):	155
Radius Squared (ft2):	24,025
Volume (ft3):	6,289.73
Lb/ft3:	56.2
Weight (lbs):	353,482.84
Assume 15% evaporates (tons VOC emitted):	26.51

VOC TAP Speciation	Liquid Mass Fraction[1]	Annual (tpy)
2,2,4-Trimethylpentane	0.001	0.01
Benzene	0.006	0.15
Cumene	0.00004	0.001
Ethylbenzene	0.0004	0.01
n-Hexane	0.006	0.17
Toluene	0.003	0.08
Xylenes	0.001	0.03

(1) VOC TAP Speciation Profile from TANKS 4.09d for Crude Oil (RVP 8)

Total Emissions from Two Tank Cleanings:

Pollutant	Uncontrolled Average (lb/hr)	Uncontrolled Annual (tpy)	Controlled Average (lb/hr)	Controlled Annual (tpy)
VOC	17.57	76.94	0.35	1.54
2,2,4-Trimethylpentane	0.01	0.04	0.0002	0.001
Benzene	0.11	0.47	0.002	0.01
Cumene	0.001	0.004	0.00002	0.0001
Ethylbenzene	0.01	0.03	0.0001	0.001
n-Hexane	0.11	0.50	0.002	0.01
Toluene	0.05	0.23	0.001	0.005
Xylenes	0.02	0.09	0.0004	0.002

$\pi r^2 = 75,438.5 \text{ ft}^2$

$1 \text{ in} = 0.833 \text{ ft}$

$V = 6,286.54 \text{ ft}^3$

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Degassing Part A
City:	Lafourche Parish
State:	Louisiana
Company:	LOOP LLC
Type of Tank:	External Floating Roof Tank
Description:	Crude Oil Storage Tank

Tank Dimensions

Diameter (ft):	310.00
Volume (gallons):	25,200,000.00
Turnovers:	1.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition	Good

Roof Characteristics

Type:	Pontoon
Fitting Category	Detail

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal	Rim-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4
Automatic Gauge Float Well/Bolted Cover, Gasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151
Roof Drain (3-in. Diameter)/90% Closed	6

Meterological Data used in Emissions Calculations: New Orleans, Louisiana (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Degassing Part A - External Floating Roof Tank
Lafourche Parish, Louisiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil RVP 8	Jul	76.57	71.25	81.89	68.06	7.2689	N/A	N/A	50.0000			207.00	Option 4: RVP=8
1,2,4-Trimethylbenzene						0.0387	N/A	N/A	120.1900	0.0033	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.9432	N/A	N/A	114.2300	0.0010	0.0005	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.8175	N/A	N/A	78.1100	0.0060	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.8663	N/A	N/A	84.1600	0.0070	0.0074	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1890	N/A	N/A	106.1700	0.0040	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.8981	N/A	N/A	86.1700	0.0040	0.0066	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0873	N/A	N/A	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						0.5424	N/A	N/A	92.1300	0.0100	0.0031	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						8.0405	N/A	N/A	49.4564	0.9497	0.9743	220.76	
Xylene (-m)						0.1582	N/A	N/A	106.1700	0.0140	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Degassing Part A - External Floating Roof Tank
Lafourche Parish, Louisiana

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):							264.1268					
Seal Factor A (lb-mole/ft-yr):							0.6000					
Seal Factor B (lb-mole/ft-yr (mph)^n):							0.4000					
Average Wind Speed (mph):							6.1000					
Seal-related Wind Speed Exponent:							1.0000					
Value of Vapor Pressure Function:							0.1682					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							7.2689					
Tank Diameter (ft):							310.0000					
Vapor Molecular Weight (lb/lb-mole):							50.0000					
Product Factor:							0.4000					
Withdrawal Losses (lb):							77.7519					
Net Throughput (gal/mo.):							25,200,000.0000					
Shell Clingage Factor (bbl/1000 sqft):							0.0060					
Average Organic Liquid Density (lb/gal):							7.1000					
Tank Diameter (ft):							310.0000					
Roof Fitting Losses (lb):							260.9663					
Value of Vapor Pressure Function:							0.1682					
Vapor Molecular Weight (lb/lb-mole):							50.0000					
Product Factor:							0.4000					
Tot. Roof Fitting Loss Fact.(lb-mole/yr):							931.1234					
Average Wind Speed (mph):							6.1000					
Total Losses (lb):							602.8450					

Roof Fitting/Status	Quantity	Roof Fitting Loss Factors KFa(lb-mole/yr)	KFb(lb-mole/(yr mph^n))	m	Losses(lb)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	4	1.60	0.00	0.00	1.8281
Automatic Gauge Float Well/Bolted Cover, Gasketed	1	2.80	0.00	0.00	0.7998
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	6	6.20	1.20	0.94	18.6754
Unslotted Guide-Pole Well/Gasketed Sliding Cover	2	25.00	13.00	2.20	195.3087
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	0.1576
Roof Leg (3-in. Diameter)/Adjustable, Pontoon Area, Gasketed	38	1.30	0.08	0.65	16.3418
Roof Leg (3-in. Diameter)/Adjustable, Center Area, Gasketed	151	0.53	0.11	0.13	28.5902
Roof Drain (3-in. Diameter)/90% Closed	6	1.80	0.14	1.10	4.2696

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: July

Degassing Part A - External Floating Roof Tank
Lafourche Parish, Louisiana

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawl Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Crude Oil RVP 8	264.13	77.75	260.97	0.00	602.84
1,2,4-Trimethylbenzene	0.02	0.26	0.02	0.00	0.29
2,2,4-Trimethylpentane (isooctane)	0.14	0.08	0.14	0.00	0.36
Benzene	1.64	0.47	1.62	0.00	3.73
Cyclohexane	1.97	0.54	1.94	0.00	4.45
Ethylbenzene	0.11	0.31	0.11	0.00	0.54
Hexane (-n)	1.74	0.31	1.72	0.00	3.78
Isopropyl benzene	0.01	0.08	0.01	0.00	0.10
Toluene	0.82	0.78	0.81	0.00	2.40
Unidentified Components	257.34	73.84	254.26	0.00	585.44
Xylene (-m)	0.33	1.09	0.33	0.00	1.75

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Degassing Part B
City:	Lafourche Parish
State:	Louisiana
Company:	LOOP LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	Crude Oil Storage Tank

Tank Dimensions

Shell Height (ft):	6.50
Diameter (ft):	310.00
Liquid Height (ft) :	6.50
Avg. Liquid Height (ft):	3.25
Volume (gallons):	3,669,935.00
Turnovers:	1.00
Net Throughput(gal/yr):	3,669,935.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.00

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: New Orleans, Louisiana (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Degassing Part B - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Crude Oil RVP 8	Jul	76.57	71.25	81.89	68.06	7.2689	6.6543	7.9266	50.0000			207.00	Option 4: RVP=8
1,2,4-Trimethylbenzene						0.0387	0.0317	0.0469	120.1900	0.0033	0.0001	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
2,2,4-Trimethylpentane (isooctane)						0.9432	0.8170	1.0852	114.2300	0.0010	0.0005	114.23	Option 2: A=6.8118, B=1257.84, C=220.74
Benzene						1.8175	1.5829	2.0801	78.1100	0.0060	0.0062	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Cyclohexane						1.8663	1.6305	2.1294	84.1600	0.0070	0.0074	84.16	Option 2: A=6.841, B=1201.53, C=222.65
Ethylbenzene						0.1890	0.1589	0.2237	106.1700	0.0040	0.0004	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.8981	2.5454	3.2898	86.1700	0.0040	0.0066	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Isopropyl benzene						0.0873	0.0725	0.1047	120.2000	0.0010	0.0000	120.20	Option 2: A=6.93666, B=1460.793, C=207.78
Toluene						0.5424	0.4645	0.6311	92.1300	0.0100	0.0031	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						8.0405	8.0225	8.0227	49.4564	0.9497	0.9743	220.76	
Xylene (-m)						0.1582	0.1328	0.1877	106.1700	0.0140	0.0013	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Degassing Part B - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):							44,743.7888					
Vapor Space Volume (cu ft):							245,299.4811					
Vapor Density (lb/cu ft):							0.0632					
Vapor Space Expansion Factor:							0.2098					
Vented Vapor Saturation Factor:							0.4440					
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):							245,299.4811					
Tank Diameter (ft):							310.0000					
Vapor Space Outage (ft):							3.2500					
Tank Shell Height (ft):							6.5000					
Average Liquid Height (ft):							3.2500					
Roof Outage (ft):							0.0000					
Roof Outage (Cone Roof)												
Roof Outage (ft):							0.0000					
Roof Height (ft):							0.0000					
Roof Slope (ft/ft):							0.0000					
Shell Radius (ft):							155.0000					
Vapor Density												
Vapor Density (lb/cu ft):							0.0632					
Vapor Molecular Weight (lb/lb-mole):							50.0000					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							7.2689					
Daily Avg. Liquid Surface Temp. (deg. R):							536.2398					
Daily Average Ambient Temp. (deg. F):							81.8500					
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):							10.731					
Liquid Bulk Temperature (deg. R):							527.7275					
Tank Paint Solar Absorptance (Shell):							0.1700					
Tank Paint Solar Absorptance (Roof):							0.1700					
Daily Total Solar Insulation Factor (Btu/sqft day):							1,819.5435					
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:							0.2098					
Daily Vapor Temperature Range (deg. R):							21.2610					
Daily Vapor Pressure Range (psia):							1.2724					
Breather Vent Press. Setting Range(psia):							0.0000					
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):							7.2689					
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):							6.6543					
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):							7.9266					
Daily Avg. Liquid Surface Temp. (deg R):							536.2398					
Daily Min. Liquid Surface Temp. (deg R):							530.9246					
Daily Max. Liquid Surface Temp. (deg R):							541.5551					
Daily Ambient Temp. Range (deg. R):							17.5000					
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:							0.4440					
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):							7.2689					
Vapor Space Outage (ft):							3.2500					

Working Losses (lb):	23,818.3353
Vapor Molecular Weight (lb/lb-mole):	50.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2689
Net Throughput (gal/mo.):	3,669,935.0000
Annual Turnovers:	1.0000
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	3,669,935.0000
Maximum Liquid Height (ft):	6.5000
Tank Diameter (ft):	310.0000
Working Loss Product Factor:	0.7500
Total Losses (lb):	68,562.1241

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: July

Degassing Part B - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Crude Oil RVP 8	23,818.34	44,743.79	68,562.12
1,2,4-Trimethylbenzene	1.73	3.25	4.98
2,2,4-Trimethylpentane (isooctane)	12.80	24.04	36.83
Benzene	147.94	277.91	425.84
Cyclohexane	177.22	332.91	510.13
Ethylbenzene	10.25	19.26	29.52
Hexane (-n)	157.26	295.42	452.68
Isopropyl benzene	1.18	2.23	3.41
Toluene	73.59	138.23	211.82
Unidentified Components	23,206.31	43,594.08	66,800.39
Xylene (-m)	30.05	56.46	86.51

EPN 1-16, STANDBY GENERATOR (CLOVELLY DOME)

Potential to Emit

LOOP LLC Port Complex
Lafourche Parish, Louisiana

Engine Data

TEMPO ID	EPN	Description	Fuel Type	Brake Hp	Annual Operating Hours	Specific Fuel Consumption (Btu/hp-hr)[a,d]	Heat Input (MMBtu/hr)[b]	Annual Heat Rate (MMBtu/yr)[c]
EQT0009	15-78	Fourchon Booster Station - Standby Generator	Diesel	805	100	7,000	5.64	564
EQT0011	17-78	Operations Center Standby Generator	Diesel	671	100	7,000	4.70	470
EQT0012	18-78	Emergency Crude Transfer Pump (Clovelly Dome)	Diesel	860	100	7,000	6.02	602
EQT0014	20-78	Clovelly Fire Pump	Diesel	274	100	7,000	1.92	192
EQT0015	21-78	Standby Generator - Brine Storage Reservoir (Clovelly Dome)	Diesel	108	100	7,000	0.76	76
EQT0018	35-88	Fire School Pump (Clovelly Dome)	Diesel	400	100	7,000	2.80	280
EQT0019	38-91	Operations Center - Fire Pump (Clovelly Dome)	Diesel	500	100	7,000	3.50	350
EQT0020	5-99	Crude Oil Tankfarm Firewater Pump (Clovelly Dome)	Diesel	1,100	100	7,000	7.70	770
EQT0021	1-07	470 bhp Emergency Generator (Small Boat Harbor)	Diesel	470	100	7,000	3.29	329
EQT0022	2-07	470 bhp Emergency Generator (Tank Facility)	Diesel	470	100	7,000	3.29	329
EQT0023	3-07	671 bhp Emergency Generator (Clovelly Dome)	Diesel	671	100	7,000	4.70	470
EQT0024	4-07	671 bhp Emergency Generator (Clovelly Control Room)	Diesel	671	100	7,000	4.70	470
EQT0025	5-07	268 bhp Emergency Generator (OC Warehouse)	Diesel	268	100	7,000	1.88	188
EQT0026	6-07	168 bhp Emergency Generator (LOCAP)	Diesel	168	100	7,000	1.18	118
EQT0047	1-10	520 hp Emergency Generator	Diesel	520	100	6,496	3.38	338
TBD	1-16	Standby Generator (Clovelly Dome)	Diesel	671	100	7,000	4.70	470

[a] Given that specific data is unavailable for these engines (except for EPN 1-10), this calculation uses the average brake-specific fuel consumption from AP-42 Table 3.3-1, Footnote a.

[b] calculated; (Btu/hp-hr * hp) / 1,000,000 (except for EPN 20-78 for which the Hp is back-calculated)

[c] calculated; MMBtu/hr * hr/yr

[d] For EPN 1-10, the Specific Fuel Consumption is calculated as follows: 24.3 gal/hr / 520 Hp * 139,000 Btu/gal. The fuel consumption (gal/hr) is per LOOP and the Btu/gal for diesel was taken from http://www.engineeringtoolbox.com/energy-content-d_868.html.

Calculation Methodology:
Average Hourly Rate [lb/hr] = Horsepower [hp] x AP-42 Emission Factor [lb/hp-hr]
Max Hourly Rate [lb/hr] = Average Hourly Rate [lb/hr]
Annual Emission Rate [tpy] = Average Hourly Rate [lb/hr] / Conversion Factor [2000 lb/ton] x Annual Operating Hours

References:
Emission Factors for EPN 1-10 for PM_{10}, NO_x, CO, and VOC were provided by the vendor (Cummins Exhaust Data, full standby emission rates) in g/hp-hr.
EPA AP-42 Chapter 3.3 Gasoline and Diesel Industrial Engines, Table 3.3-1, Table 3.3-2, October 1996
EPA AP-42 Chapter 3.4 Large Stationary and All Stationary Dual-fuel Engines, Table 3.4-1, Table 3.4-3, October 1996
The Toxic Air Pollutant emission factors that are shown below are those with E-4 and greater. Those smaller than E-4 were omitted as they all generate annual ton/yr < 0.0005, which per LDEQ policy manual, can be excluded for any emissions unit.

Criteria Pollutants Emissions Factors

Pollutant	Source	Emission Factor (lb/hp-hr)
PM10	AP-42 Table 3.3-1 (<600 Hp)	0.002
SO2	AP-42 Table 3.3-1 (<600 Hp)	0.002
NOx	AP-42 Table 3.3-1 (<600 Hp)	0.031
CO	AP-42 Table 3.3-1 (<600 Hp)	0.007
VOC	AP-42 Table 3.3-1 (<600 Hp)	0.002
PM10	AP-42 Table 3.4-1 (>600 Hp)	0.0007
SO2	AP-42 Table 3.4-1 (>600 Hp)[d]	0.0004
NOx	AP-42 Table 3.4-1 (>600 Hp)	0.024
CO	AP-42 Table 3.4-1 (>600 Hp)	0.006
VOC	AP-42 Table 3.4-1 (>600 Hp)	0.001
PM10	Vendor	0.001
NOx	Vendor	0.01
CO	Vendor	0.001
VOC	Vendor	0.0001

[d] As guided by AP-42 Chapter 3, Table 3.4-1, SO_2 Emission Factor is 0.00809*S_1 lb/hp-hr for diesel engines; S = sulfur content % = 0.05.

Toxic Air Pollutants Emission Factors

Pollutant	Source	Emission Factor (lb/MMBtu)	Emission Factor (lb/hp-hr)
Benzene	AP-42 Table 3.3-2 (<600 Hp)	9.33E-04	6.53E-06
Toluene	AP-42 Table 3.3-2 (<600 Hp)	4.09E-04	2.86E-06
Xylenes	AP-42 Table 3.3-2 (<600 Hp)	2.85E-04	2.00E-06
Formaldehyde	AP-42 Table 3.3-2 (<600 Hp)	1.18E-03	8.26E-06
Acetaldehyde	AP-42 Table 3.3-2 (<600 Hp)	7.67E-04	5.37E-06
PAH	AP-42 Table 3.3-2 (<600 Hp)	1.68E-04	1.18E-06
Benzene	AP-42 Table 3.4-3 (>600 Hp)	7.76E-04	5.43E-06
Toluene	AP-42 Table 3.4-3 (>600 Hp)	2.81E-04	1.97E-06
Xylenes	AP-42 Table 3.4-3 (>600 Hp)	1.93E-04	1.35E-06

Criteria Pollutants Emissions Summary

TEMPO ID	EPN	Brake Horsepower <600 or >600 Hp?	PM10			PM2.5*			SO2			NOx			CO			VOC		
			Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)
EQT0009	15-78	>600	0.56	0.56	0.03	0.56	0.56	0.03	0.33	0.33	0.02	19.32	19.32	0.97	4.43	4.43	0.22	0.57	0.57	0.03
EQT0011	17-78	>600	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81	3.69	3.69	0.18	0.47	0.47	0.02
EQT0012	18-78	>600	0.60	0.60	0.03	0.60	0.60	0.03	0.35	0.35	0.02	20.64	20.64	1.03	4.73	4.73	0.24	0.61	0.61	0.03
EQT0014	20-78	<600	0.60	0.60	0.03	0.60	0.60	0.03	0.56	0.56	0.03	8.49	8.49	0.42	1.83	1.83	0.09	0.68	0.68	0.03
EQT0015	21-78	<600	0.24	0.24	0.01	0.24	0.24	0.01	0.22	0.22	0.01	3.35	3.35	0.17	0.72	0.72	0.04	0.27	0.27	0.01
EQT0018	35-88	<600	0.88	0.88	0.04	0.88	0.88	0.04	0.82	0.82	0.04	12.40	12.40	0.62	2.67	2.67	0.13	0.99	0.99	0.05
EQT0019	38-91	<600	1.10	1.10	0.06	1.10	1.10	0.06	1.03	1.03	0.05	15.50	15.50	0.78	3.34	3.34	0.17	1.24	1.24	0.06
EQT0020	5-99	>600	0.77	0.77	0.04	0.77	0.77	0.04	0.44	0.44	0.02	26.40	26.40	1.32	6.05	6.05	0.30	0.78	0.78	0.04
EQT0021	1-07	<600	1.03	1.03	0.05	1.03	1.03	0.05	0.96	0.96	0.05	14.57	14.57	0.73	3.14	3.14	0.16	1.16	1.16	0.06
EQT0022	2-07	<600	1.03	1.03	0.05	1.03	1.03	0.05	0.96	0.96	0.05	14.57	14.57	0.73	3.14	3.14	0.16	1.16	1.16	0.06
EQT0023	3-07	>600	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81	3.69	3.69	0.18	0.47	0.47	0.02
EQT0024	4-07	>600	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81	3.69	3.69	0.18	0.47	0.47	0.02
EQT0025	5-07	<600	0.59	0.59	0.03	0.59	0.59	0.03	0.55	0.55	0.03	8.31	8.31	0.42	1.79	1.79	0.09	0.66	0.66	0.03
EQT0026	6-07	<600	0.37	0.37	0.02	0.37	0.37	0.02	0.34	0.34	0.02	5.21	5.21	0.26	1.12	1.12	0.06	0.41	0.41	0.02
EQT0047	1-10	<600	0.64	0.64	0.03	0.64	0.64	0.03	1.07	1.07	0.05	4.99	4.99	0.25	0.62	0.62	0.03	0.07	0.07	0.003
TBD	1-16	>600	0.47	0.47	0.02	0.47	0.47	0.02	0.27	0.27	0.01	16.10	16.10	0.81	3.69	3.69	0.18	0.47	0.47	0.02

* Assumed PM2.5 = PM10.

Toxic Air Pollutants Emissions Summary†

TEMPO ID	EPN	Brake Horsepower <600 or >600 Hp?	Benzene			Toluene			Xylene			Acetaldehyde			Formaldehyde			PAH		
			Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)	Avg (lb/hr)	Max (lb/hr)	Annual (ton/yr)
EQT0009	15-78	>600	0.004	0.004	*0.0002*	0.002	0.002	*0.0001*	0.001	0.001	*0.0001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0011	17-78	>600	0.004	0.004	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0012	18-78	>600	0.005	0.005	*0.0002*	0.002	0.002	*0.0001*	0.001	0.001	*0.0001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0014	20-78	<600	0.002	0.002	*0.0001*	0.001	0.001	*0.00004*	0.001	0.001	*0.00003*	0.001	0.001	*0.0001*	0.002	0.002	*0.0001*	0.0003	0.0003	*0.00002*
EQT0015	21-78	<600	0.001	0.001	*0.00004*	0.0003	0.0003	*0.00002*	0.0002	0.0002	*0.00001*	0.001	0.001	*0.00003*	0.001	0.001	*0.00004*	0.0001	0.0001	*0.00001*
EQT0018	35-88	<600	0.003	0.003	*0.0001*	0.001	0.001	*0.0001*	0.001	0.001	*0.00004*	0.002	0.002	*0.0001*	0.003	0.003	*0.0002*	0.0005	0.0005	*0.00002*
EQT0019	38-91	<600	0.003	0.003	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	0.003	0.003	*0.0001*	0.004	0.004	*0.0002*	0.001	0.001	*0.00003*
EQT0020	5-99	>600	0.01	0.01	*0.0003*	0.002	0.002	*0.0001*	0.001	0.001	*0.0001*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0021	1-07	<600	0.003	0.003	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	0.003	0.003	*0.0001*	0.004	0.004	*0.0002*	0.001	0.001	*0.00003*
EQT0022	2-07	<600	0.003	0.003	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	0.003	0.003	*0.0001*	0.004	0.004	*0.0002*	0.001	0.001	*0.00003*
EQT0023	3-07	>600	0.004	0.004	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0024	4-07	>600	0.004	0.004	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.00005*	NA	NA	NA	NA	NA	NA	NA	NA	NA
EQT0025	5-07	<600	0.002	0.002	*0.0001*	0.001	0.001	*0.00004*	0.001	0.001	*0.00003*	0.001	0.001	*0.0001*	0.002	0.002	*0.0001*	0.0003	0.0003	*0.00002*
EQT0026	6-07	<600	0.001	0.001	*0.0001*	0.0005	0.0005	*0.00002*	0.0003	0.0003	*0.00002*	0.001	0.001	*0.00005*	0.001	0.001	*0.0001*	0.0002	0.0002	*0.00001*
EQT0047	1-10	<600	0.003	0.003	*0.0002*	0.001	0.001	*0.0001*	0.001	0.001	*0.0001*	0.003	0.003	*0.0001*	0.004	0.004	*0.0002*	0.001	0.001	*0.00003*
TBD	1-16	>600	0.004	0.004	*0.0002*	0.0013	0.0013	*0.00007*	0.0009	0.0009	*0.00005*	NA	NA	*NA*	NA	NA	*NA*	NA	NA	*NA*

† Italicized emission estimates are <0.0005 tons and therefore excluded from the EIQ sheets for these sources.

INSIGNIFICANT ACTIVITY
DAY TANK FOR STANDBY GENERATOR
(CLOVELLY DOME)

Potential to Emit

LOOP LLC Port Complex
Lafourche Parish, Louisiana

Source ID: **Insignificant Tanks**
Facility-wide

Fuel Type Diesel
Calculation Methodology:
EPA *TANKS 4.0.9d Program Software*
Annual Emission Rate [tpy] = TANKS Emission Report / Conversion Factor [2000 lb/ton]

Emission Calculation and Summary:

Tank ID	Tank Description	Tank Capacity [gallons]	Tank Contents	TANKS Emission Report Total VOC [lbs/yr]	Annual Emission Rate [tpy]
2-78	Fuel Tank for Emergency Generator (Clovelly Dome)	8,200	Diesel	18.20	0.01
22-78	Emer. Crude Transfer Pump Fuel Tank (Clovelly Dome)	8,200	Diesel	2.29	0.001
25-88	Tank 3 Operations Center Fuel Tank (Clovelly Dome)	550	Diesel	0.16	0.0001
26-88	Tank 4 Operations Center Tank (Clovelly Dome)	4,000	Diesel	1.16	0.0006
27-88	Tank 5 Fourchon Booster Station Tank	1,000	Diesel	0.30	0.0002
28-88	Tank 6 Fourchon Booster Station Emer. Generator Fuel Tank	322	Diesel	0.11	0.0001
29-88	Tank 7 Fourchon Booster Station Dock Fuel Tank	560	Diesel	0.16	0.0001
30-88	Tank 8 Clovelly Day Tank for Fire Pump	80	Diesel	0.02	0.00001
31-88	Tank 9 Clovelly Day Tank for Generator	116	Diesel	0.03	0.00002
32-88	Tank 10 Clovelly Underground Slop Oil Tank by Lab	2,000	Slop Oil (Crude)	17.82	0.01
34-88	Tank 12 Small Boat Harbor Tank	260	Diesel	0.07	0.00004
36-89	Day Tank for Operations Center Standby Generator (Clovelly Dome)	94	Diesel	0.06	0.00003
37-91	Small Boat Harbor Diesel Tank	564	Diesel	0.20	0.0001
38-16	Day Tank for Standby Generator (Clovelly Dome)	94	Diesel	0.06	0.00003

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	38-16
City:	Lafourche Parish
State:	Louisiana
Company:	LOOP LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	Day Tank for Standby Generator

Tank Dimensions

Shell Height (ft):	5.00
Diameter (ft):	2.00
Liquid Height (ft) :	4.00
Avg. Liquid Height (ft):	3.00
Volume (gallons):	94.00
Turnovers:	17.02
Net Throughput(gal/yr):	1,600.00
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft)	0.00
Slope (ft/ft) (Cone Roof)	0.06

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig)	0.00

Meterological Data used in Emissions Calculations: New Orleans, Louisiana (Avg Atmospheric Pressure = 14.75 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

38-16 - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	69.99	64.84	75.14	68.06	0.0090	0.0077	0.0105	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
1,2,4-Trimethylbenzene						0.0302	0.0247	0.0367	120.1900	0.0100	0.0485	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
Benzene						1.5308	1.3336	1.7516	78.1100	0.0000	0.0020	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1524	0.1282	0.1804	106.1700	0.0001	0.0032	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.4867	2.1671	2.7992	86.1700	0.0000	0.0004	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Toluene						0.4474	0.3832	0.5204	92.1300	0.0003	0.0230	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						0.0077	0.0070	0.0074	134.5121	0.9866	0.8635	189.60	
Xylene (-m)						0.1273	0.1069	0.1510	106.1700	0.0029	0.0594	106.17	Option 2: A=7.009, B=1462.266, C=215.11

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

38-16 - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

Annual Emission Calculations	
Standing Losses (lb):	0.0186
Vapor Space Volume (cu ft):	6.3486
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor:	0.0391
Vented Vapor Saturation Factor:	0.9990
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	6.3486
Tank Diameter (ft):	2.0000
Vapor Space Outage (ft):	2.0208
Tank Shell Height (ft):	5.0000
Average Liquid Height (ft):	3.0000
Roof Outage (ft):	0.0208
Roof Outage (Cone Roof)	
Roof Outage (ft):	0.0208
Roof Height (ft):	0.0000
Roof Slope (ft/ft):	0.0625
Shell Radius (ft):	1.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0090
Daily Avg. Liquid Surface Temp. (deg. R):	529.6574
Daily Average Ambient Temp. (deg. F):	68.0375
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	527.7275
Tank Paint Solar Absorptance (Shell):	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,443.5256
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0391
Daily Vapor Temperature Range (deg. R):	20.5932
Daily Vapor Pressure Range (psia):	0.0028
Breather Vent Press. Setting Range(psia):	0.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0090
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0077
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0105
Daily Avg. Liquid Surface Temp. (deg R):	529.6574
Daily Min. Liquid Surface Temp. (deg R):	524.5091
Daily Max. Liquid Surface Temp. (deg R):	534.8057
Daily Ambient Temp. Range (deg. R):	19.0583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9990
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0090
Vapor Space Outage (ft):	2.0208

Working Losses (lb):	0.0446
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0090
Annual Net Throughput (gal/yr.):	1,600.0000
Annual Turnovers:	17.0207
Turnover Factor:	1.0000
Maximum Liquid Volume (gal):	94.0033
Maximum Liquid Height (ft):	4.0000
Tank Diameter (ft):	2.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0632

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

38-16 - Vertical Fixed Roof Tank
Lafourche Parish, Louisiana

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.04	0.02	0.06
Hexane (-n)	0.00	0.00	0.00
Benzene	0.00	0.00	0.00
Toluene	0.00	0.00	0.00
Ethylbenzene	0.00	0.00	0.00
Xylene (-m)	0.00	0.00	0.00
1,2,4-Trimethylbenzene	0.00	0.00	0.00
Unidentified Components	0.04	0.02	0.05

GCXVII ACTIVITY
PORTABLE THERMAL OXIDIZER DURING TANK CLEANING

Potential to Emit

LOOP LLC Port Complex
Lafourche Parish, Louisiana

Source ID: **GCXVII Activity**
Source Description: **PORTABLE THERMAL OXIDIZER DURING TANK CLEANING**

Emission Calculation and Summary:

Hours operated per day	10
Number of days per cleaning	30
Total hours operated per year	600
Total Loaded	76.94 tpy
Benzene Heating Value	18,400 Btu/Lb
Degassing Heat Duty	4.72 MMBtu/hr
Natural Gas Fuel	363 scfm
NG Heat Value	1,020 Btu/scf
NG Heat Duty	22.22 MMBtu/hr
Total Heat Duty	26.93 MMBtu/hr

Combustion Pollutant	**Emission Factor (lb/MMBtu)**	**lbs/hr**	**TPY**
Carbon Monoxide	0.08	2.22	0.67
Nitrogen Oxides	0.10	2.64	0.79
Sulfur Dioxide	0.001	0.02	0.005
PM_{10}	0.01	0.20	0.06
$PM_{2.5}$	0.01	0.20	0.06

Note: Emission factors taken from AP-42, Table 1.4-1 (7/98). There is no published emission factor for emissions of $PM_{2.5}$. As a conservative measure, $PM_{2.5}$ emissions are assumed to be 100% of PM_{10} emissions.

APPENDIX B

ENVIRONMENTAL ASSESSMENT STATEMENT

Note that an EAS was submitted with the December 2014 application that initially proposed the Clovelly Tank Facility Crude Oil Storage Tank Project to construct six tanks. The modified project includes an additional five tanks to be constructed for a total of eleven tanks.

Environmental Assessment Statement

1. **Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?**

Yes. The LOOP LLC - Port Complex currently operates under Title V Permit No. 1560-00027-V1. This application includes the addition of five crude oil storage tanks, to be permitted under the existing crude oil storage tank CAP.

The potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible. As discussed below, the facility is not anticipated to have any adverse environmental impacts.

The potential impacts from air emissions from the facility are minimal and will not cause any adverse impacts. All applicable federal and state regulations are complied with within a timely manner and are utilized to minimize air emissions.

2. **Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?**

Yes. The social and economic benefits of the LOOP LLC – Port Complex greatly outweigh its environmental impact. The facility is subject to strict requirements to control air emissions. Controls are in place to prevent any other environmental media from being affected by the facility's operations. The LOOP LLC – Port Complex is not anticipated to have an adverse impact on the environment. The facility has significant social and economic benefits, on a local and national scale, with minimal environmental impact.

3. **Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits?**

No. The proposed project is planned for the existing LOOP LLC – Port Complex. There are no alternative projects (i.e., technologies) which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits.

4. **Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?**

No. It is an existing facility which is zoned for industrial use. Any other site would not offer more protection to the environment than the proposed project site without unduly curtailing non-environmental benefits.

5. **Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?**

No. There are no mitigating measures which would offer more protection to the environment than the project as proposed without unduly curtailing non-environmental benefits. The facility meets all state and federally applicable requirements to minimize emissions of regulated air pollutants. Emissions associated with operations at the facility have been minimized.